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INDIO GENERAL PLAN 2020

VOLUME II

Prepared for:

**CITY OF INDIO
100 Civic Center Mall
P.O. Drawer 1788
Indio, California 92202**

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Prepared by:

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OCTOBER 1993





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CITY COUNCIL

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OCTOBER 1993



INDIO GENERAL PLAN 2050

VOLUME II

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INTRODUCTION

1.1 USING THE GENERAL PLAN

In preparing the Indio General Plan document, one of the primary goals was to produce a document that is usable and user-friendly. In order to do this, the General Plan has been divided into a series of seven linked documents to make it easier for readers to find the information they need without wading through information they do not need at the time. For instance, if readers want to know the existing biology for a portion of the Planning Area, they can turn to Section 4.5 in the Environmental Setting Report (ESR). If they want to know the City's goals and policies related to biological resources, they can read Section 4.5 in the Goals and Policies Report (GPR).

The above examples bring up another point in the ease of using these documents. The major documents that make up the General Plan have been organized so that a reader can easily access information between two documents. The documents marked with a solid square (■) in Section 1.2 have been organized so that their main chapters match each other. As shown above, Section 4.5 deals with biological resources in the ESR, Community Issues Report (CIR), GPR, and the General Plan Environmental Impact Report (EIR).

Another effort at making the General Plan easier to use was done by reducing redundant information whenever possible. Excluding the summary, the other General Plan documents have been designed so that information is not repeated in several locations. This makes the documents both easier to use and maintain in the future. The following are examples of this consolidation.

- ▶ The ESR provides a single document approach to describing the existing conditions in the Planning Area. This document provides the existing conditions data used by both the GPR and the EIR.

- ▶ The General Plan summary has been designed to summarize all of the documents within the General Plan, including the EIR. This arrangement provides the reader with one place to look for the information.
- ▶ The EIR itself does not contain a mitigation monitoring plan. All of the mitigations formulated through the impact analysis have been incorporated as implementation measures within the GPR. In order to meet the legal requirements for providing a mitigation monitoring plan, the implementation measures in the General Plan have been designed to list the program, which is responsible for its implementation, and a timing requirement.

1.2 GENERAL PLAN DOCUMENTS

The following section will provide a brief overview of the contents of the seven documents that make up the General Plan. As stated above, the documents marked with a solid square (■) are linked to each other for easy access of information.

- **General Plan Summary.** This document, provides a one-stop location for getting an overview of the General Plan and the component documents. For many interested parties, this may be the only document they need to read to get an overview of what is proposed. This document describes the Planning Area, summarizes the General Plan goals and policies, provides an overview of the environmental setting, summarizes the community issues raised during the preparation of the General Plan, and presents environmental impacts associated with the proposed plan.
- **Goals and Policies Report.** The GPR is the heart of the new General Plan. This report contains the plan for the future development and operation of the City of Indio. As the name

INTRODUCTION

suggests, this document provides the goals and policies that the City will follow, and it also contains a full set of implementation measures that will ensure the success of the General Plan.

- **Environmental Setting Report.** This document is designed to provide the reader with a detailed overview of the existing conditions within the Planning Area prior to adoption of the new General Plan.

- **Community Issues Report.** During preparation of the General Plan, a series of interviews were held with groups of community leaders, staff, City Council, Planning Commission, and the general public to start formulating a plan for the Indio of tomorrow. In these interviews, people were asked what they found desirable in a city. The list derived was then compared to how well Indio met these criteria. In addition to these interviews, several workshops were held with the public at large, with residents from the different areas within Indio, and during office hour sessions at City Hall. The information and ideas collected during these sessions were then summarized by each General Plan element and subelement (i.e., Land Use, Housing).

- **Environmental Impact Report.** This document is provided to meet the requirements of the California Environmental Quality Act (CEQA). The EIR provides an assessment of the environmental impacts associated with the approval and implementation of the General Plan's goals, policies, and implementation measures. In evaluating the General Plan, the Planning Commission and City Council will need to understand the potential impacts associated with the project prior to taking action on the plan.

- **Appendices.** The appendices to the General Plan provide technical details and calculations that support the findings and conclusions contained within the other documents. The appendices contained in this document include the following:

- ▶ Appendix A contains a summary of proposed land uses by land use designation and by Traffic Analysis Zone (TAZ).
- ▶ Appendix B contains the final and draft traffic study for the General Plan. The draft study

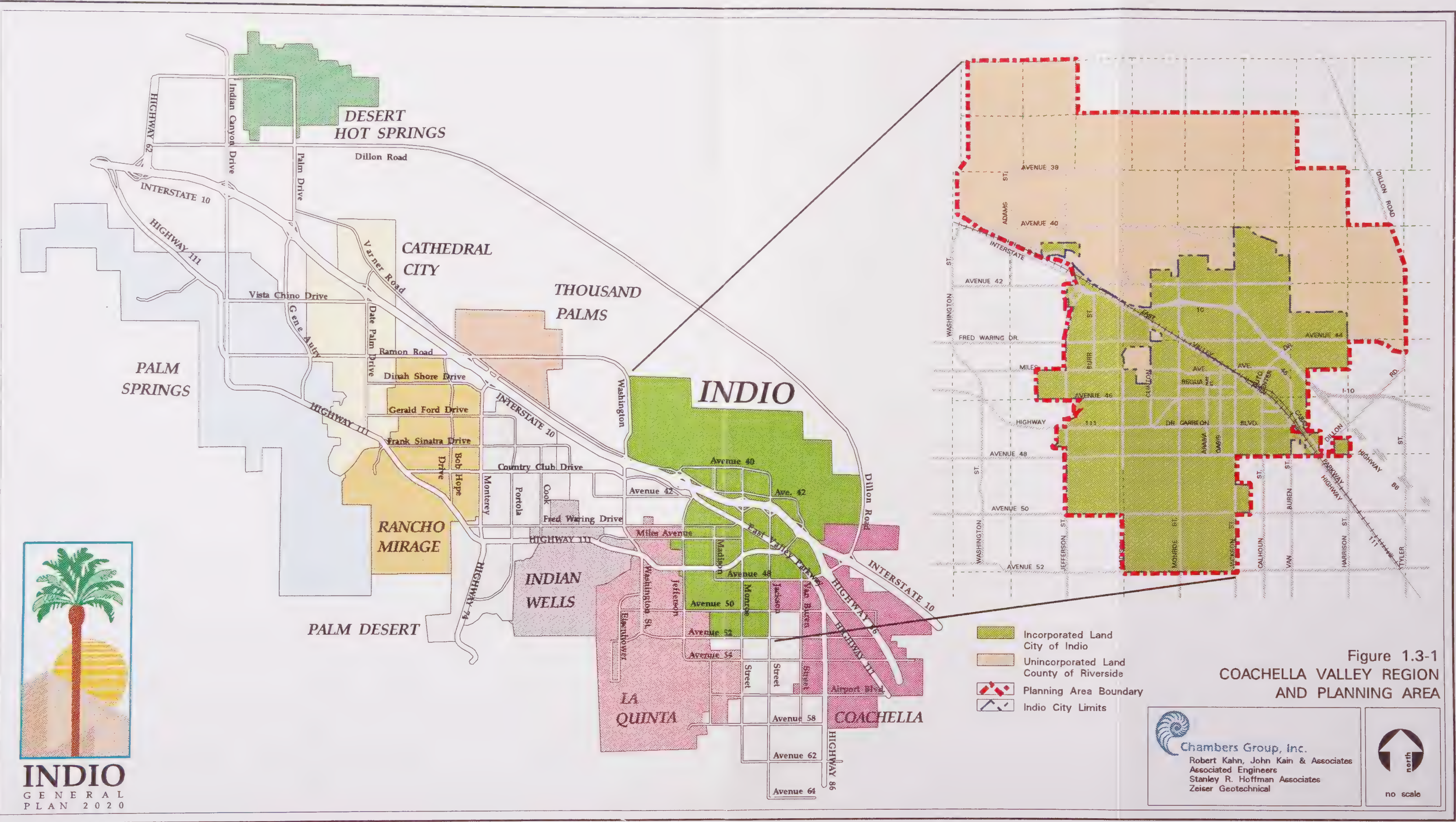
modeled the land uses proposed in the Draft General Plan, and the final study supplemented this information to reflect the final land use decision.

- ▶ Appendix C contains the economic studies prepared for the General Plan. The first study in the appendix evaluates the impacts of the proposed plan. The second study was an economic forecast used to prepare the Draft General Plan.
- ▶ Appendix D contains the fall cultural resources study conducted for the ESR.
- ▶ Appendix E and F contain the noise and air quality analyses, respectively, conducted for the General Plan.
- ▶ Appendix G contains the Notice of Preparation (NOP), persons contacted, and response obtained from the NOP.
- ▶ Appendix H contains a list of suggested significance criteria to be used in the evaluation of future projects from an environmental perspective.

- **Preparation Resources.** This document provides information on references cited in the General Plan, agency contacts, and a list of preparers of these documents.

1.3 REGIONAL LOCATION

The City of Indio is located in Riverside County, approximately 120 miles directly east of Los Angeles and 15 miles east of Palm Springs. Adjacent jurisdictions include the City of La Quinta to the west, an unincorporated area of Riverside County to the south, the City of Coachella to the east, and unincorporated county land to the north (see Figure 1.3-1).



1.4 LOCAL SETTING

The Planning Area for the General Plan contains the existing City limits, the City's current sphere-of-influence, and additional unincorporated lands that have a direct impact and link to the City. The total Planning Area covers approximately 41.5 square miles as shown on Figure 1.3-1. Of this area, 20.0 square miles are currently within the City limits of Indio. The 1992 population for the City of Indio was 40,378.

DEMOGRAPHICS

In order to plan for a community, it is important to know a city on all of its levels. The first level is an understanding of what people look for in a city, what their hopes and dreams are, and how they envision Indio becoming this ideal city. For the General Plan program, this information was collected during a series of interviews, workshops, community meetings, and open office hours at the City Hall. This information was then used as the basis for the CIR contained within the General Plan document set.

The second level of information collected for this General Plan deals with Indio's "big picture." From the perspective of the City as a whole, what do we know about the residents of the City? How many residents have a high school diploma? What is the age breakdown of the population -- does Indio have a large retired population, or a working class citizenry? What type of housing is available in Indio? In order to plan for the community, this demographic information is needed to complete the understanding of what Indio is today.

The following section discusses the demographics for the City of Indio based on the 1990 U.S. Census information. Census data for the Planning Area are reported in a variety of forms and on various geographic levels. It is possible to report how many houses are on a single block or in the entire City. Because the purpose of this section is to characterize the City and its residents, statistics in this section are limited to the incorporated portions of the Planning Area. By focusing on the City itself, better summary statistics are available from the census.

The following discussion has been divided into five categories: population, households, employment, education, and housing. As stated above, these statistics will be for the City of Indio only. Additional statistics on the entire Planning Area are included in other parts of this document, and more detailed employment and financial information is included in Section 3.6 (Economic Development) and Section 6 (Housing).

2.1 POPULATION

According to the 1990 U.S. Census, the City of Indio had a population of 36,793 persons. By 1992, the State Department of Finance reported a population of 40,400 (rounded to nearest "50") in Indio. This ranked Indio as the second largest city in the Valley, with only 1,650 persons separating Indio from Palm Springs, which was the largest city from a population standpoint. The following chart provides a comparison for all Coachella Valley cities in 1992.

City	1992 Population ¹
Cathedral City	34,100
Coachella	18,450
Desert Hot Springs	13,400
Indio Wells	2,920
INDIO	40,400
La Quinta	14,885
Palm Desert	24,800
Palm Springs	42,050
Rancho Mirage	10,450
¹ 1992 State Department of Finance, rounded to nearest "50"	

By race, the population had the breakdown shown on the following table.

Race	Population	Percent
White	20,045	54
Black	1,482	4
American Indian, Eskimo, or Aleut	281	1
Asian or Pacific Islander	588	2
Other Race	14,397	39
TOTAL	36,793	100

In the census questionnaires, information concerning a person's race is requested. Although more than a dozen categories of race are included, Spanish/Hispanic origin or descent is not included as a category in this question. In response to needs for data concerning this ethnic group, the census began collecting data using a second question that asked if the person was of Spanish/Hispanic origin or descent in 1970. Because there are two questions (one asking the person's race with no Spanish/Hispanic category, and the second asking if a person is of Spanish/Hispanic origin or descent), a Hispanic person would need to mark one of the existing race categories in the first question (White, Other Race, etc.) and would then mark if they were of Spanish/Hispanic background on the second questions. Therefore, the table above includes the Spanish/Hispanic population.

This understanding of how data are collected is important given the size of the Hispanic population in the City of Indio. In 1990, the City had a Hispanic population of 68.1 percent.

Race	Population	Percent
Hispanic Origin (any race)	25,068	68.1

In understanding the population of Indio, another important piece of data to examine is the distribution of the population by sex and age. In Indio, the population was fairly evenly distributed by sex. The male population was 18,651 (50.7 percent), and the female population was 18,142 (49.3 percent).

The age distribution in the community was a little more statistically interesting. Figure 2.1-1 shows an age "cohort" chart for the population. This figure shows the population by sex and by 5-year age categories, or cohorts. A typical shape for this type of chart is a pyramid. That is, you have more young persons than older persons.

There are two related items of note on this figure: the number of persons aged 1 to 9, and the number of persons aged 20 to 29. The age group 20 to 29 is typically the major child-bearing years for adults. Indio's bulge for these years is directly correlated to the large number of children aged 1 to 9. This fact has important implications for Indio's housing, schools, parks, recreation programs, health services,

and other public services as these children grow up in the community.

In comparison to the other cities in the Coachella Valley, Indio has a comparatively young population. The median age of the population of Indio was 26.3 in 1991. This was the second youngest median age in the Valley, with Coachella having the youngest population. [Note: If you were to chart the age of every person in a community, the age where half the population was younger and half the population was older would be called the "median age."] The following chart shows the 1991 median age for the cities in the Coachella Valley.

City	1991 Median
Cathedral City	30.4
Coachella	24.4
Desert Hot Springs	30.2
Indio Wells	61.0
INDIO	26.3
La Quinta	37.0
Palm Desert	42.3
Palm Springs	43.1
Rancho Mirage	59.0
Average	39.3

This large contingent of young families has been fueling the continued growth into the Indio market over the last decade. Figure 2.1-2 shows the historic population of Indio from the 1930 census through the 1990 census. On this figure, the solid bars correspond to the actual population measured in that year. The zigzag line overlaying these bars is the growth rate of the community from one census period to the next. For example, from 1980 to 1990, Indio grew by 15,182 persons for a total growth rate of 70.3 percent. This figure shows that the community has had a high rate of growth that has sustained itself from the 1960s to the present.

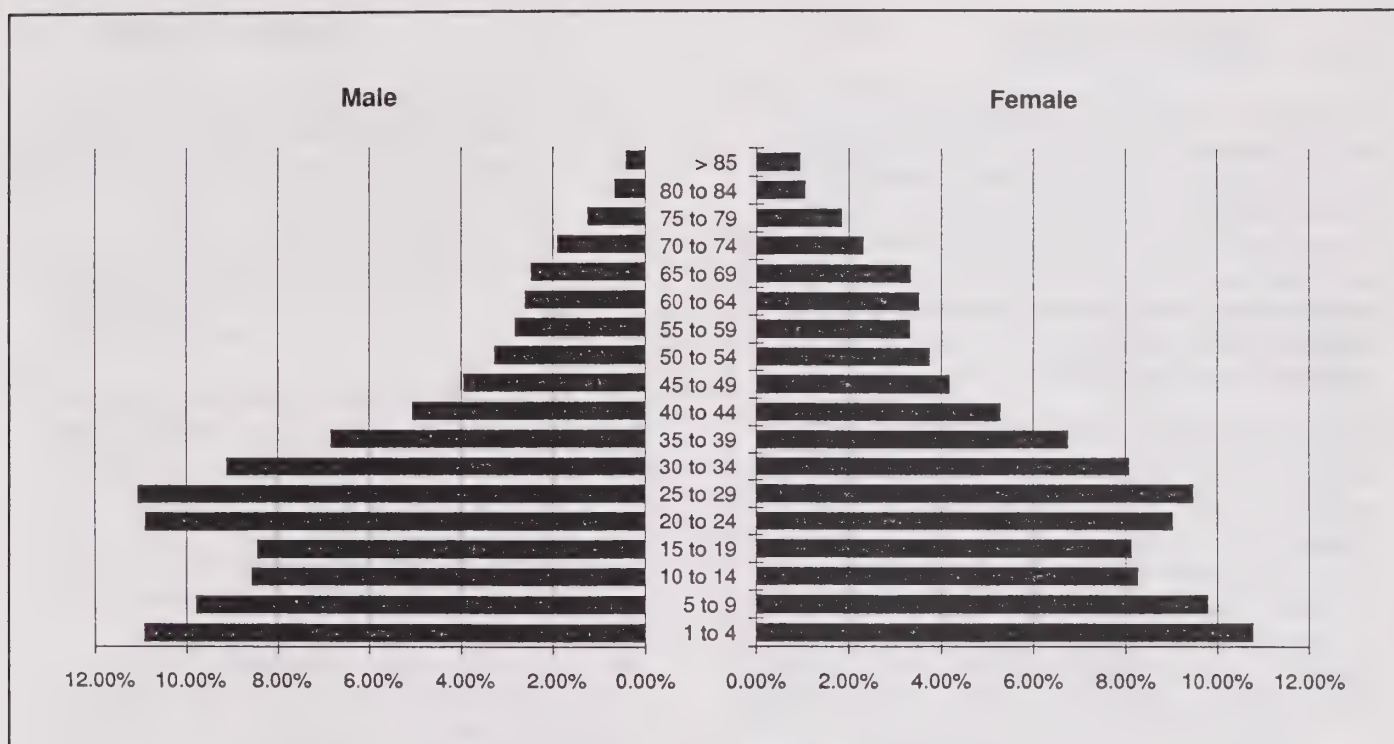


Figure 2.1-1
HISTORIC AGE DISTRIBUTION

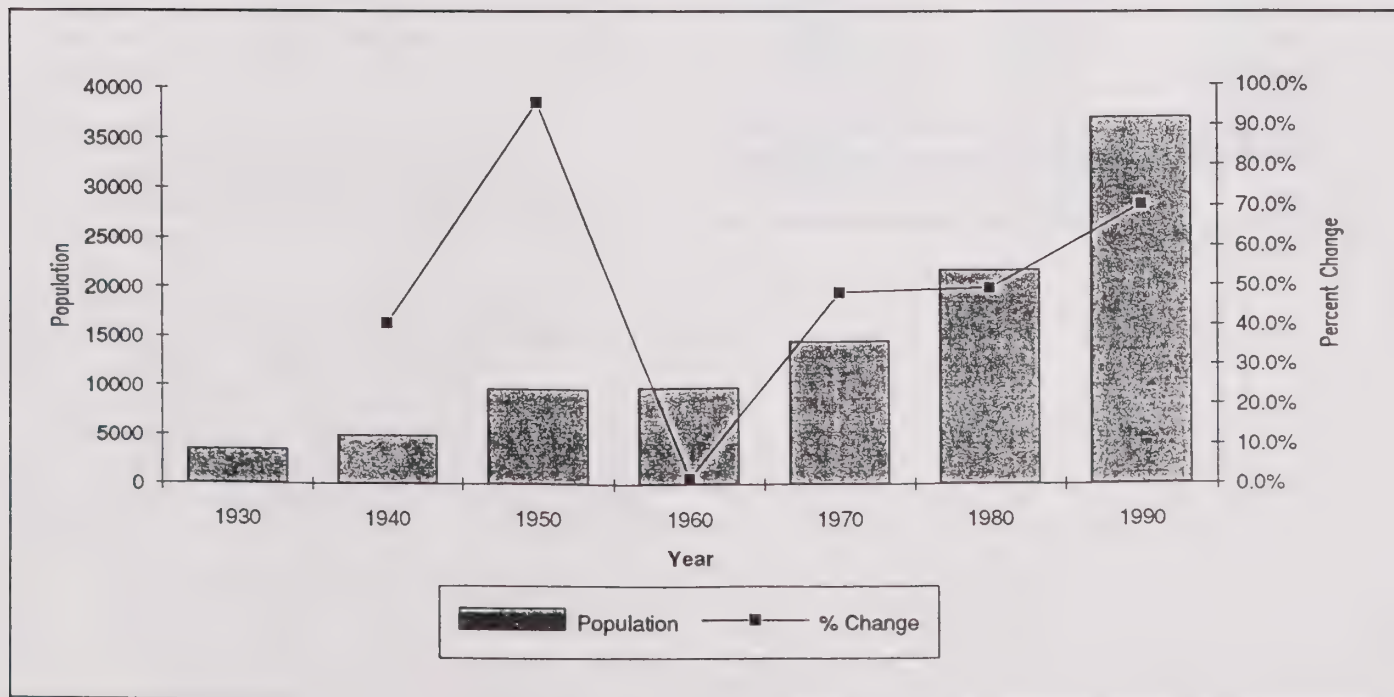


Figure 2.1-2
HISTORIC POPULATION GROWTH

2.2 HOUSEHOLDS

In the 1990 census, Indio had a total of 10,747 households. These total households are further distinguished by the census as being family or nonfamily households. According to the census Users Guide, a family household is one in which "at least one person [is] related to the householder by blood, marriage, or adoption." Conversely, a nonfamily household is one in which there is no family relationship as defined above.

The following table provides a summary of households in Indio in 1990. As shown in the table, three out of four households are family households. The table also shows the number of households that are considered large-family households. These households have six or more persons per household and account for 13.9 percent of the households in Indio. Most of nonfamily households are made up of one person households.

Persons per Household	Family Households	Nonfamily Households
1 person	n/a	18.6%
2 persons	20.8%	3.1%
3 persons	14.9%	0.8%
4 persons	16.1%	0.4%
5 persons	11.0%	0.2%
6 persons	6.5%	0.1%
7 or more	7.4%	0.1%
TOTAL	76.7%	23.3%

2.3 EMPLOYMENT

In describing the employment of persons in Indio, the census provides several different categories for the population. These are described below.

- ▶ **Work Force.** This is the total number of persons who are 16 years old and over. In 1990, the work force in Indio was 25,542 persons.
- ▶ **Employed Persons.** Persons that are 16 years and older who are currently employed or are on temporary leave (illness, vacation, strike, and so forth). This category does not include those in the military and persons "whose activity consisted of their own housework, school work, or volunteer work. . ."
- ▶ **Unemployed Persons.** This group of persons includes those who are out of work and have been actively looking for work over the month prior to the census date.
- ▶ **Labor Force.** This category includes those currently employed, unemployed, or members of the armed forces.
- ▶ **Not In Labor Force.** This group of persons is derived by subtracting the labor force from the work force.
- ▶ **Unemployment Rate.** This statistic is determined by dividing the number of unemployed persons by the civilian labor force (labor force minus military persons).

The following table provides an overview of the employment status in Indio by sex of the person in 1990. Based on this table, Indio has an unemployment rate of 9.8 percent (9.5 percent male, 10.3 percent female). This was derived by adding the employed and unemployed males and females in the labor force and dividing this into the total number unemployed.

Total Employed	= 8,957 + 6,138
	= 15,095
Total Unemployed	= 944 + 702
	= 1,646
Labor Force	= 15,095 + 1,646
	= 16,741
Unemployment	= 1,646 ÷ 16,741
	= 9.8%

Category	Male	Female
	#	#
Employed	8,957	6,138
Unemployed	944	702
Not In Labor Force	2,945	5,856

For this employment, the following income levels were earned by Indio households and families. The income levels presented are the "median" income values for each category. The median value represents the center of the income distribution for the City.

Household Income	\$25,976
Family Income	\$26,925
Nonfamily Income	\$14,736
Per Capita Income	\$9,244

2.4 EDUCATION

The education level of the population can be helpful in determining education/job training policies for adults and children. For the City of Indio, the following table presents the education levels for all persons age 25 and over. This table shows that only slightly over 50 percent of the population over 25 has completed high school. This points to the need to address adult education, drop-out prevention, and trade school education in order to attract the types of high-tech industry that the City would like to see developed in the Enterprise Zone.

Category	#	%
Less than high school	5,861	30.1
High school (no diploma)	3,496	17.9
High school graduate	4,130	21.2
Some college (no degree)	3,063	15.7
Associate degree	1,148	5.9
Bachelor's degree	1,176	6.0
Graduate or professional degree	617	3.2
TOTAL	19,491	100.0
Percent high school graduate or higher		52.0
Percent Bachelor's Degree or higher		9.2

2.5 HOUSING

The housing characteristics of the City and the Planning Area are fully documented in the Housing Element section of this document (Section 6). The following is a brief introduction to some summary statistics that are of interest in describing the overall housing market.

Category	#	%
Total housing units	13,028	
Occupied housing units	10,747	82.5
Owner occupied	5,270	40.5
Renter occupied	5,477	42.0
Persons per owner-occupied unit	3.25	
Persons per renter-occupied unit	3.45	
Units with over 1 person per room	3,184	29.6
Value (4,004 units answering)		
\$49,000 or less	174	4.3
\$50,000 to \$99,999	2,776	69.3
\$100,000 to \$149,999	893	22.3
\$150,000 to \$199,999	106	2.6
\$200,000 to \$299,999	36	0.9
\$300,000 or more	19	0.5
Median home value	\$83,600	

COMMUNITY DEVELOPMENT

3.1 LAND USE

The following section is provided to give the reader an overview of the land uses existing in, and planned for development in the General Plan Planning Area. In order to cover this material, this section has been divided into five subsections as follows:

- ▶ Existing General Plan Designations,
- ▶ Existing Land Uses,
- ▶ Existing General Plan Goals and Policies,
- ▶ General Plan Implementation, and
- ▶ General Plan/Zoning Consistency.

The Planning Area for the General Plan Update contains both incorporated and unincorporated areas; therefore, the first subsection on existing General Plan designations will cover both the current Indio General Plan and Riverside County General Plan. In the remaining portions of this section, the information presented will focus on the City's existing General Plan because this is the document being updated by the City for the entire Planning Area.

3.1.1 Existing General Plan Designations

Figure 3.1-1 shows the distribution of current General Plan land use designations for both the City of Indio and the County of Riverside. To provide a better understanding of the development potential under these plans, Table 3.1-1 gives an acreage breakdown for each land use type and the range of housing units and population possible under these plans.

The future housing units and population were based on both a low- and high-density scenario. The

following chart explains how these densities were derived for each General Plan.

	Low	High
Indio	This scenario was based on typical densities achieved in each designation today.	These numbers reflect maximum allowed densities under each designation.
Riverside County	Low end of density range presented in General Plan.	High end of density range presented in General Plan.

As with the General Plan update, this maximum buildout would never be achieved in the real world, but it does provide a worst-case scenario upon which the current and updated plans for the Planning Area can be compared.

INDIO FACTS:

The Indio General Plan Planning Area covers 41.5 square miles. Of this, 20.0 square miles are currently in the City of Indio.

As shown in Table 3.1-1, the most common land use under the City's current General Plan is Low Density Residential and Desert Areas under the County plan. The table also shows a buildout population for the Planning Area. Under the low-density scenario, the population would peak at approximately 86,000. The high-density scenario would produce a population of over 249,000. This figure will be used later in the General Plan as a comparison of change between the old and the updated General Plans.

Table 3.1-1

DESCRIPTION OF EXISTING GENERAL PLANS AT BUILDOUT

Designation	Density		Acres	Dwelling Units		Projected Population	
	Low	High		Low	High	Low	High
CITY OF INDIO							
Very Low-Density Residential	1	3	0.0	0	0	0	0
Country Estate	1.5	3	1,346.9	2,020	4,041	6,282	12,568
Low-Density Residential	3.5	10	5,154.3	18,040	51,543	56,104	160,299
Medium-Density Residential	8	25	503.0	4,024	12,575	12,515	39,108
High-Density Residential	15	34	11.9	179	405	557	1,260
Medium Residential - Office	0	25	102.5	0	2,563	0	7,971
High Residential - Office	0	34	59.5	0	2,023	0	6,292
Neighborhood Commercial			65.5	0	0	0	0
Regional & CBD Commercial			1,013.4	0	0	0	0
Tourist Commercial			619.3	0	0	0	0
Light Industry			615.4	0	0	0	0
Heavy Industry			534.1	0	0	0	0
Parks & Public Uses			530.1	0	0	0	0
Schools			172.0	0	0	0	0
Waterway			1,062.9	0	0	0	0
Agriculture			1,624.8	0	0	0	0
Urban Transition			147.7	0	0	0	0
Agriculture Preserve			0.0	0	0	0	0
COUNTY OF RIVERSIDE							
Multifamily	8	14	61.6	493	862	1,533	2,681
2B	2	5	155.5	311	778	967	2,420
3A	0.4	2	1,766.9	707	5,534	2,199	10,991
3B	0.2	0.4	48.9	10	20	31	62
4	0	0.2	464.8	0	93	0	289

Table 3.1-1

DESCRIPTION OF EXISTING GENERAL PLANS AT BUILDOUT

Designation	Density		Acres	Dwelling Units		Projected Population	
	Low	High		Low	High	Low	High
Specific Plans (Del Webb and Adams 34)			2,107.3	1,845	1,845	5,738	5,738
Commercial			131.2	0	0	0	0
Manufacturing			0.2	0	0	0	0
Agriculture			1,127.2	0	0	0	0
Parks/Forest			24.5	0	0	0	0
Mountainous Areas			849.6	0	0	0	0
Desert Areas			3,697.3	0	0	0	0
Wildlife/Vegetation			1.1	0	0	0	0
Water Resources			2,568.2	0	0	0	0
TOTALS			25,567.6	27,629	80,282	85,926	249,679

¹ Population calculated as the number of housing units multiplied by 3.11.

3.1.2 Existing Land Use

In order to determine the current use of land within the Planning Area, the Coachella Valley Association of Governments' (CVAG) existing land use database was obtained by the City of Indio. This database, which covers the entire Coachella Valley, was prepared by interpreting large-scale aerial photographs and performing field checking to ensure accuracy. Upon receipt, additional updates to this database were prepared by Chambers Group to bring the data up to existing conditions in 1991. These data were then corrected to match the City's General Plan base map so that comparative acreage measurements could be conducted.

The resulting existing land use map is shown on Figure 3.1-2. A summary of the land uses reported on this figure are summarized in Table 3.1-2. From this table, it is obvious that agriculture and unimproved land are the most common existing land uses in the Planning Area. For the entire Planning Area, agriculture use accounts for 22.7 percent and

unimproved use accounts for 54.2 percent of the land area. The high amounts in these categories are understandable based on the unimproved nature of the lands north of the I-10 Freeway. What is surprising is the amount of unimproved land existing within the City of Indio itself. Based on this study, the City of Indio is currently 41 percent unimproved land.

**INDIO
FACTS:**

Based on an existing land use survey, the City of Indio is currently 41 percent unimproved land.

3.1.3 Existing General Plan Goals and Policies

The current Indio General Plan was adopted in 1978. The General Plan adopted at that time was a multitiered land use plan, consisting of a land use map and a policy plan.

The Policy Plan is a lengthy policy document that includes all nine General Plan elements mandated by the State at that time, along with some localized attention areas.

The City of Indio also has an adopted Zoning Ordinance and Plan, which was designed to be consistent with the 1978 General Plan. The two plans, land use and zoning, encompass the same Planning Area and are designed with common land uses, land use designations, and geographical areas.

The current General Plan provides major community goals for the Human Environment, the Economic Environment, and the Physical Environment. Those goals are described below.

Human Environment Goals

The Human Environment Goals specify factors of importance to residents of the City of Indio that need to be considered in land use analysis. The factors identified include the following:

- ▶ income,
- ▶ racial equality,
- ▶ community health,
- ▶ religion,
- ▶ traffic safety,
- ▶ housing,
- ▶ education,
- ▶ crime,
- ▶ culture,
- ▶ mental health, and
- ▶ taxation.

Economic Environmental Goals

The Economic Environment Goals include

- ▶ encouragement of economic development incentives and other measures to provide for a wide variety of employment opportunities,
- ▶ establish an economic base that assures sustained community livelihood,

- ▶ promote the optimum use of land, and
- ▶ promote affirmative action.

Physical Environment Goals

The Physical Environment Goals include

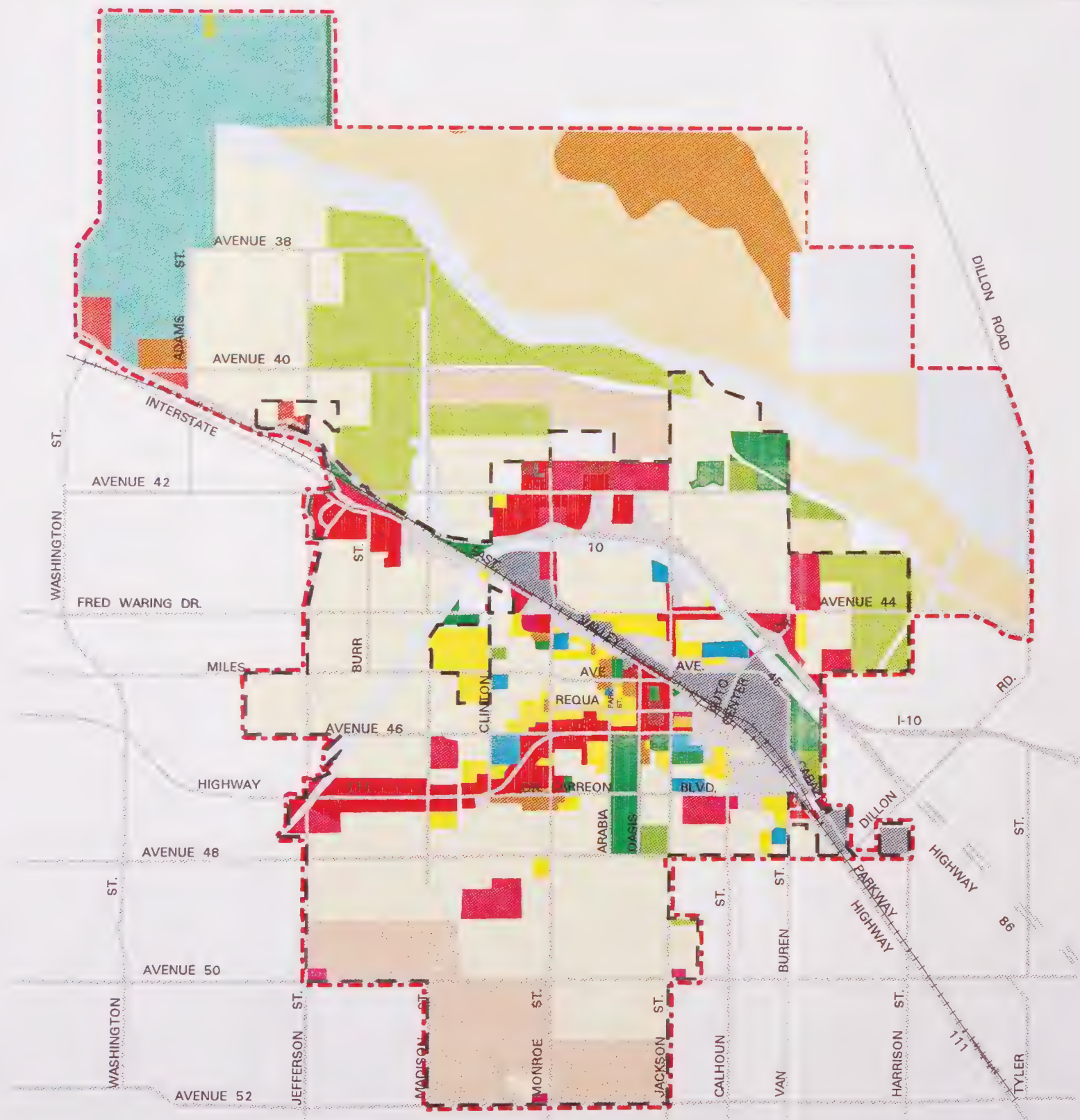
- ▶ minimize inefficient use of resources,
- ▶ minimize pollution, and
- ▶ encourage planning of the manmade environment.

The General Plan also identifies other goal areas for consideration by the City. They include land use and urbanization, transportation, open space and conservation, and public safety as major areas where policy considerations should guide future land use decisions.

3.1.4 Implementation of Current General Plan

The General Plan identifies the following short-range programs to implement the major provisions of the Plan:

- ▶ zoning and subdivision controls,
- ▶ capital improvements program,
- ▶ block grants,
- ▶ specific plan areas,
- ▶ City administration,



Land Use Designations

- INDIO GENERAL PLAN**
- Very Low Density Residential
 - Country Estate
 - Low Density Residential
 - Medium Density Residential
 - High Density Residential
 - Medium Residential - Office
 - High Residential - Office
 - Neighborhood Commercial
 - Regional & CBD Commercial
 - Tourist Commercial
 - Light Industrial
 - Heavy Industrial
 - Parks & Public Uses
 - Schools
 - Waterway
 - Agriculture
 - Urban Transition
 - Agriculture Preserve
- COUNTY GENERAL PLAN**
- Multi-Family (8-14 du/ac)
 - 2B (2-5 du/ac)
 - 3A (.4-2 du/ac)
 - 3B (.2-.4 du/ac)
 - 4 (0-.2 du/ac)
 - Specific Plans
 - Commercial
 - Manufacturing
 - Agriculture
 - Parks / Forests
 - Mountainous Areas
 - Desert Areas
 - Wildlife / Vegetation
 - Water Resources

Figure 3.1-1
INDIO AND RIV. COUNTY
EXISTING GENERAL PLANS



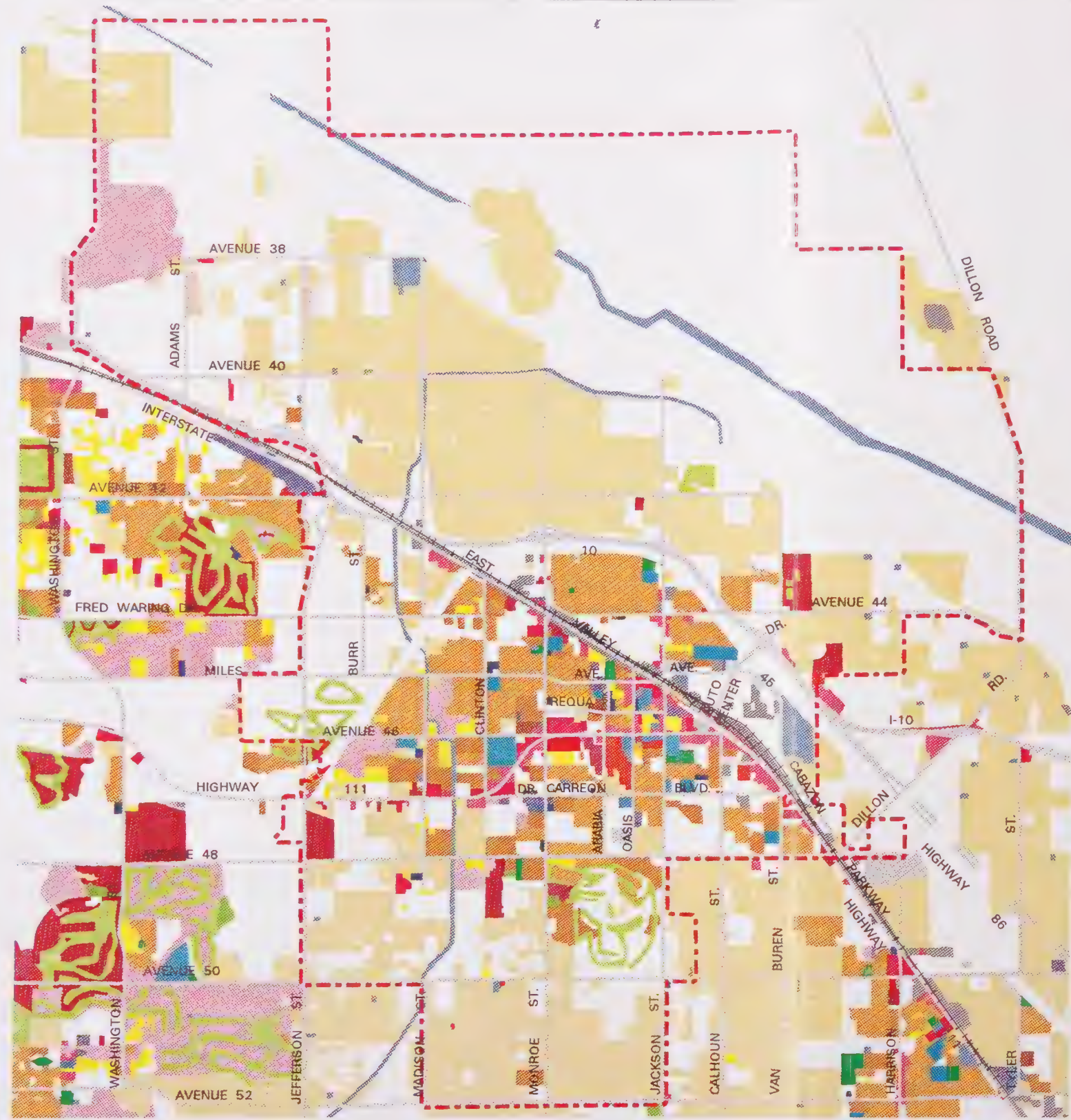
INDIO
GENERAL
PLAN 2020



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'



Land Use Categories

- Very Low Rural
- Low Rural
- Low Residential
- Medium Residential
- High Residential
- Very High Residential
- Resort Residential
- Neighborhood Commercial
- Community Commercial
- Regional Commercial
- Tourist Commercial
- Resort Commercial
- Commercial Office
- Business/Ind Park
- Light Industrial
- Manufacturing
- Utilities
- Schools
- Hospital
- General Aviation Airport
- Government Offices
- Church
- Community Park
- Golf Course
- Regional Park
- Agriculture/Mining
- Under Construction
- Unimproved Land

Source: CVAG Land Use
Study (1990), 1991 Update
by Chambers Group, Inc.

Figure 3.1-2
1991 EXISTING LANDUSE



INDIO
GENERAL
PLAN 2020



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

Table 3.1-2
PLANNING AREA - EXISTING LAND USES¹

Land Use	Density ²	Acres	Percent of Planning Area
Residential			
Very Low	1.1	350	1.3
Low	2.0	57	0.2
Medium	4.0	211	0.8
Medium High	5.5	1,479	5.5
High	7.0	593	2.2
Very High	11.7	22	1.0
Resort	5.0	214	0.8
Subtotal		2,925	10.9
Commercial			
Neighborhood		274	1.0
Community		133	0.5
Regional		25	0.1
Tourist		67	0.3
Resort		91	0.3
Office		60	0.2
Subtotal		651	2.4
Industrial			
Business/Industrial Park		19	0.1
Light		39	0.1
Manufacturing		341	1.3
Subtotal		399	1.5
Public/Quasi-Public/Institutional			
Utilities		577	2.2
Airport		2	0.0
High School		157	0.6
Hospital		8	0.0
Church		47	0.2
Governmental Offices		32	0.1
Subtotal		823	3.1
Open Space/Agriculture/Other			
Community Park		43	0.2
Regional Park		14	0.1
Golf Course		251	0.9
Agriculture		6,030	22.7
Mining		476	1.8
Vacant		14,358	54.2
Under Construction		585	2.2
Subtotal		21,757	82.1
TOTAL		26,555	100.0

¹ Based on 1990 CVAG Land Use Database; updated to 1991 by Chambers Group, Inc. Land Use categories are from CVAG database.

² Density values were adjusted to get the best fit for existing uses and known U.S. Census housing numbers.

- ▶ intergovernmental coordination, and
- ▶ other programs.

The 1978 General Plan also identified certain other areas of importance and recommended further study. The first area identified was the City's Capital Improvement Program. The General Plan recommends that amendments to the City's Water Master Plan, Master Plan for Drainage, and other studies related to sewer and other services be undertaken and completed regularly.

A second area identified addresses the City's Community Development Program. At the time the General Plan was adopted, the Community Development Block Grant program (CDBG), funded by the Federal Government, constituted a significant source of local project funding. The General Plan recognized this and suggested that CDBG funds be applied to assist in the implementation of the General Plan goals and policies.

Further study was recommended to help identify the City's optimum future for industrial land uses, their optimum location, and the integration of the development of industrial land base as a catalyst to fulfilling other portions of the General Plan goals and policies.

The 1978 General Plan also recognized the unique and somewhat fragile nature of the Central Business District (CBD). How the CBD would fare in the future development of the City was portrayed as a critical element in the future development of the community. The General Plan also suggested the importance of the commercial corridor along Indio Boulevard and State Highway 111 as important to the City's commercial future. Further study was also recommend for airport development, as well as regional shopping center development.

3.1.5 General Plan Vs. Current Planning Practice

A recurring problem with the current General Plan that has troubled the City's development in the last several years has been the lack of a policy framework that is consistent with current planning practice and site design techniques. For example, the City does not currently have the means to

approve a Specific Plan. This has been troublesome for major projects such as the Pacific Indio project. For Pacific Indio, the City had to approve the project with a lengthy development agreement that covered many of the items that could have been implemented through a Specific Plan process.

INDIO FACTS: *The City's current General Plan is over 15 years old. The updated plan will provide Indio with "state-of-the-art" planning capabilities.*

The City's current General Plan also does not cover items such as hillside grading, clustering of units, and variable unit types that are typical in a golf course development.

3.1.6 General Plan/Zoning Consistency

The current City of Indio General Plan and Zoning Ordinance and Plan are considered to be generally consistent as required by State law. However, there have been certain instances where inconsistencies have been noted by City planning staff within the recent past. These difficulties consist of problems between language of allowed land uses within the General Plan land use designations and Zoning Ordinance land uses and designation boundaries.

The first area noted, that of language difficulties, stems from the date in which the current General Plan was adopted (1978) and subsequent amendments to the City's Zoning Regulations since that date. For example, there are certain difficulties in developing contemporary land use designations and development standards current in today's planning practice while maintaining consistency with the older land use designations set forth by the 1978 General Plan. At the current time, the Country Estates designation is being implemented through zoning to allow clustered residential developments at

densities not always consistent with the original General Plan. This is done because the CE(PD) designation in the City's zoning code allows the most flexibility in design.

A problem in applying the existing General Plan and zoning results because the General Plan land use designations and/or zoning district boundaries typically do not follow existing land parcel boundaries. In some instances, an existing parcel of land is bisected by either or one of these land use district boundaries, which makes it difficult to apply only one land use for that parcel of land. In these cases, current Community Development Department staff members have been identifying this situation to potential developers and/or subdividers and have been recommending the need for General Plan amendments to correct these situations. It has been observed that the number of amendments to the current General Plan may be greater than what would otherwise be necessary due to this problem.

3.2 CIRCULATION

The following section presents the existing roadway system conditions within the Indio General Plan Planning Area. This section includes descriptions of regional facilities, key arterials and collector streets, travel lanes and intersection controls, 1992 daily traffic volumes, a review of the existing City and County Circulation Elements, the Shadow Hills Interim Policy Plan circulation plan, and existing public transit. Current traffic count data sheets and supplemental count source references are included in Appendix B to provide a detailed compilation of the count information summarized in this section.

In conjunction with the preparation of the General Plan Community Development Element, a traffic model was developed. The traffic model will validate 1992 conditions and will be used to forecast future traffic conditions within the City of Indio. This report includes an overview of the traffic modeling process and parameters that will be used in the traffic model.

3.2.1 Regional Facilities

Three highway corridors traverse the Planning Area and provide regional access. These facilities are shown on Figure 3.2-1 and are described below.

- ▶ **Interstate 10 (I-10).** I-10 traverses in a generally east/west direction diagonally through the central portion of the Planning Area. To the west, I-10 continues through Riverside and San Bernardino Counties and is the regional link into the greater Los Angeles area. To the east, I-10 continues through the desert to the California/Arizona border. Within the Planning Area, daily traffic volumes range from 45,000 vehicles per day west of Washington Street to 14,200 vehicles per day east of Dillon Road.
- ▶ **Highway 111.** State Highway 111 runs in a generally east/west direction through the center of the Planning Area between Brawley to the southeast and Palm Springs to the northwest. The highway is predominantly a four-lane divided cross section, changing to a two-lane divided highway east of Highway 86 (Harrison Street). Daily traffic volumes in 1992 range from 23,300 vehicles per day west of

Washington Street to 12,000 vehicles per day south of Avenue 52.

- ▶ **Highway 86.** State Highway 86 begins at the junction of Highway 111 and East Valley Parkway and runs southeasterly as East Valley Parkway (along the same route as Highway 111) to Harrison Street. At Harrison Street, it turns south where it eventually runs along the west side of the Salton Sea to Brawley. Within the Planning Area, the highway is a four-lane divided cross section. Daily traffic volumes (1992) ranged from 29,000 vehicles per day at Highway 111 and East Valley Parkway to 12,800 vehicles per day south of Avenue 52.

3.2.2 Key Arterials, Collector Streets

- ▶ **East Valley Parkway.** East Valley Parkway runs northwest to southeast through the center of the Planning Area parallel to the Southern Pacific Railroad tracks, beginning at the Jefferson Street interchange with I-10. Grade separations exist with Monroe Street, Jackson Street, and Auto Center Drive. East Valley Parkway is a four-lane divided roadway. Existing daily traffic volumes range from 31,500 vehicles per day south of Dillon Road to 19,500 vehicles per day east of Madison Street. East Valley Parkway is classified as a Major Highway north of Auto Center Drive and an Arterial Highway south of Auto Center Drive.
- ▶ **Washington Street.** This north/south roadway runs along the westerly boundary of the Planning Area, extending southerly from Ramon Road to the community of La Quinta with an interchange at the I-10 Freeway. Washington Street is currently a two-lane undivided roadway north of I-10 and is a mix of two-lane and four-lane divided roadway south of I-10. Existing daily traffic volumes range from 1,500 vehicles per day north of Varner Road to 19,700 vehicles per day south of Highway 111. This roadway is generally classified as an arterial, highway on the Riverside County General Plan Circulation Element.



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Figure 3.2-1
GENERAL PLAN STUDY AREA
ROADWAY NETWORK



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no scale

- ▶ **Jefferson Street.** This north/south roadway on the west boundary of most sections of the Planning Area extends south from Avenue 38 to the community of La Quinta with an interchange at the I-10 Freeway. Jefferson Street is currently a two-lane undivided roadway along most of its length, with two-lane and four-lane divided segments between Miles Avenue and Avenue 52. Existing daily traffic volumes (1992) ranged from 800 vehicles per day north of Varner Road to 11,000 vehicles per day south of Highway 111. On the Riverside County General Plan Circulation Element, Jefferson Street is classified as a Major Highway north of I-10 and an Arterial Highway south of I-10. In La Quinta, this roadway is classified as a major arterial from Fred Waring Drive south through La Quinta.
- ▶ **Monroe Street.** Monroe Street runs north/south through the center of the Planning Area with an interchange at the I-10 Freeway. A grade separation exists over East Valley Parkway and the Southern Pacific Railroad tracks. This roadway is mostly an undivided two-lane road with a four-lane undivided segment north of East Valley Parkway and a four-lane divided segment south of East Valley Parkway. Existing daily traffic volumes range from 2,300 vehicles per day north of Avenue 42 to 11,400 vehicles per day south of Dr. Carreon Boulevard. Monroe Street is classified as a Secondary Highway north of Avenue 50 and an Arterial Highway south of Avenue 50.
- ▶ **Jackson Street.** Jackson Street runs north/south through the center of the Planning Area and the downtown area of Indio with an interchange at the I-10 Freeway. A grade separation exists over East Valley Parkway and the Southern Pacific Railroad tracks. This roadway is mostly an undivided two-lane road, with a four-lane undivided segment north of Avenue 44, and a four-lane divided segments south of Avenue 44 and south of Highway 111. Existing daily traffic volumes range from 400 vehicles per day north of Avenue 42 to 16,900 vehicles per day south of Avenue 45. Jackson Street is classified as a Secondary Highway north of Avenue 50 and an Arterial Highway south of Avenue 50.
- ▶ **Van Buren Street/Auto Center Drive.** Van Buren Street is a north/south roadway that runs through the easterly portion of the Planning Area, extending southerly from Avenue 42 to Highway 111 with an interchange at the I-10 Freeway. Between I-10 and Highway 111, the roadway becomes Auto Center Drive. After a discontinuous segment near the railroad tracks, Van Buren Street continues southerly from Highway 111. Van Buren Street is currently an undivided two-lane road along most of its length. The Auto Center Drive segment is a four-lane divided roadway with a four-lane bridge over the I-10 freeway. Existing daily traffic volumes range from 1,900 vehicles per day south of Avenue 50 to 5,300 vehicles per day in the area of Auto Center Drive. In the existing City of Indio Circulation and Transportation Element, Van Buren Street is classified as an Arterial Highway. On the Riverside County General Plan Circulation Element, this roadway is classified as a Secondary Highway north of I-10 and as a Major Highway south of East Valley Parkway.
- ▶ **Dillon Road.** This north/south roadway runs along the east boundary of the Planning Area and extends northwest from East Valley Parkway and eventually connects into SR 62. Interchanges exist at the I-10 Freeway and at the terminus of the State Route 86 Freeway. Dillon Road is currently a two-lane undivided road along most of its length with a four-lane undivided segment south of I-10. Existing daily traffic volumes range from 1,400 vehicles per day north of Avenue 44 to 13,200 vehicles per day north of Cabazon Avenue. On the Riverside County General Plan Circulation Element, Dillon Road is classified as an Arterial Highway.
- ▶ **Fred Waring Drive/Avenue 44.** This roadway runs east/west through the center of the Planning Area with a discontinuity at East Valley Parkway and the railroad tracks. West of East Valley Parkway, the roadway is designated as Fred Waring Drive, and east of Monroe Street it is designated as Avenue 44. This roadway is mostly an undivided two-lane road with a four-lane undivided segment between Market Street and I-10. Existing daily traffic volumes range from 1,000 vehicles per day west of Dillon Road to 18,300 vehicles per day west of

Washington Street. This roadway is classified as a Secondary Highway west of Dillon Road.

- **Miles Avenue.** Miles Avenue is an east/west street that runs through the center of the Planning Area, terminating at East Valley Parkway. This roadway is one of the limited crossings of the Whitewater River to the west of the downtown area. Miles Avenue is mostly a two-lane undivided roadway, with a four-lane divided segment west of Monroe Street. Existing daily traffic volumes range from 3,400 vehicles per day west of Washington Street to 5,800 vehicles per day east of Madison Street. Miles Avenue is classified as a Secondary Highway east of Jefferson Street and a Major Highway west of Jefferson Street.

INDIO FACTS:

The major traffic carriers at the present time are the I-10 Freeway, East Valley Parkway, and Highway 111. These carry 38,000, 22,900, and 21,500 vehicles per day on their busiest sections.

3.2.3 1992 Travel Lanes and Intersection Controls

Figure 3.2-2 identifies the existing number of through-travel lanes for roadways within the Planning Area. The existing intersection controls are shown on Figure 3.2-3.

3.2.4 1992 Daily Traffic Volumes

Figure 3.2-4 shows the existing traffic count data collected for the ESR. These data are made up of both new counts taken in April 1992 specifically for the ESR as well as supplemental counts obtained from the City of Indio, Caltrans, and Riverside County. Appendix B details the source of each count and provides a detailed summary of the count data.

Daily volume to capacity ratios for existing roadways have been determined for locations where daily traffic volumes are available. Figure 3.2-5 shows the daily volume to capacity ratios for the Planning Area.

3.2.5 Existing General Plan Circulation Element

Table 3.2-1 lists the current City of Indio General Plan Circulation Element roadway classifications for existing and future roadways in the Planning Area. Revisions to the Circulation Element have been proposed in the northeast portion of the Planning Area near Washington Street.

3.2.6 Existing Riverside County General Plan Circulation Element

Figure 3.2-6 exhibits the current County of Riverside General Plan Circulation Element roadway classifications for existing and future roadways in the Planning Area. Figure 3.2-7 illustrates the current Riverside County arterial street cross sections.

3.2.7 Existing Transit Service

SunLine Transit Agency is a joint powers authority of the valley cities and Riverside County. Daily ridership is currently 8,000 persons. A 12-percent per-year increase is forecasted by the agency, although a 20- to 30-percent ridership increase has been experienced in prior years. SunLine envisions



Explanation

4U Number represents
4D the number of lanes.

U = Undivided
D = Divided

Figure 3.2-2
EXISTING NUMBER OF
THROUGH LANES



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no scale






Traffic Controls

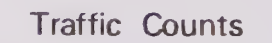
- ▼ Stop Sign
- ⊙ Four-way Stop
- ⊕ Signalized Intersection

Figure 3.2-3
EXISTING INTERSECTION CONTROLS

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18.0 (in thousands of vehicles per day)
18.0 = 18,000

Figure 3.2-4
EXISTING TRAFFIC COUNTS



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no scale

Daily Capacity

.47 (percent of roadway
capacity)
.47 = 47%



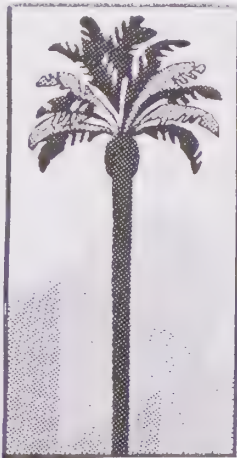
Figure 3.2-5
DAILY VOLUME TO
CAPACITY RATIOS



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no scale






Roadway Classifications

- Freeway
- Expressway
- Urban Arterial
- Arterial
- Major
- Secondary
- Specific Plan Road

Figure 3.2-6
RIVERSIDE COUNTY GENERAL
PLAN CIRCULATION ELEMENT


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1" = 6000'



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Table 3.2-1

CITY OF INDIO: EXISTING GENERAL PLAN CIRCULATION ELEMENT**FREEWAYS**

Interstate 10

MAJOR ARTERIALS

Highway 86 (East Valley Parkway)

Highway 111

Dillon Road

Avenue 48 (Proposed)

ARTERIALS

Washington Street

Jefferson Street

Madison Street (Proposed)

Clinton Street (Proposed)

Monroe Street

Oasis Street

Jackson Street

Van Buren Street (Proposed)

Cabazon Road (Proposed)

Country Club Drive

Avenue 44

Miles Avenue (Avenue 45)

Avenue 46

Avenue 47 (Proposed)

Avenue 50 (Proposed)

Avenue 52 (Proposed)

COLLECTORS

Madison Street (Proposed)

Aladdin Street

Arabia Street

Palo Verde Street

Commerce Street (Proposed)

Eastside Drive

Oleander Street

Hoover Street (Proposed)

Kenner Street

Requa Avenue

Date Street

Market Street (Proposed)

Avenue 42

Avenue 46

Avenue 49 (Proposed)

Dillon Avenue

Bliss Street

Dune Palms Road (Proposed)

a public transportation system that will enhance the quality of life within the Coachella Valley, safeguard the environment, and serve the transportation needs of all segments of the valley population.

The SunLine Transit Agency provides the SunBus Transit Service in the City of Indio with three lines: Route Nos. 5, 6, and 19. The current routes within the Planning Area are shown on Figure 3.2-8.

At approximate half-hour increments throughout the day, the SunBus Transit Service covers the Planning Area as follows:

- ▶ **Route No. 5.** This route covers central Indio, serving the Senior Citizen Center near Requa Avenue and then travels down Van Buren and Harrison Streets to Avenue 52.
- ▶ **Route No. 6.** This route runs from the center of Indio at Dr. Carreon Boulevard then down Grapefruit Boulevard (Highway 111) and connects to Thermal and Mecca.
- ▶ **Route No. 19.** This route extends all the way from the McCandless Library to Desert Hot Springs. This route passes through the Cities of Palm Springs, Cathedral City, Palm Desert, and Indian Wells.

The fare structure, as of January 1992, for general fare (one ride) runs from \$0.50 to \$1.25. Senior/disabled, monthly, and discount passes are available.

3.2.8 Traffic Model Description

This section of the report describes the operational procedures and data input formats of the model. The subdivision of the modeling area into a representative zone system and the creation of the roadway network are described. The procedures used for trip generation and distribution, and assignment of traffic to the roadway network are discussed.

The computer modeling process consists generally of seven individual but interrelated steps, as follows:

1. definition of a traffic analysis zone system,

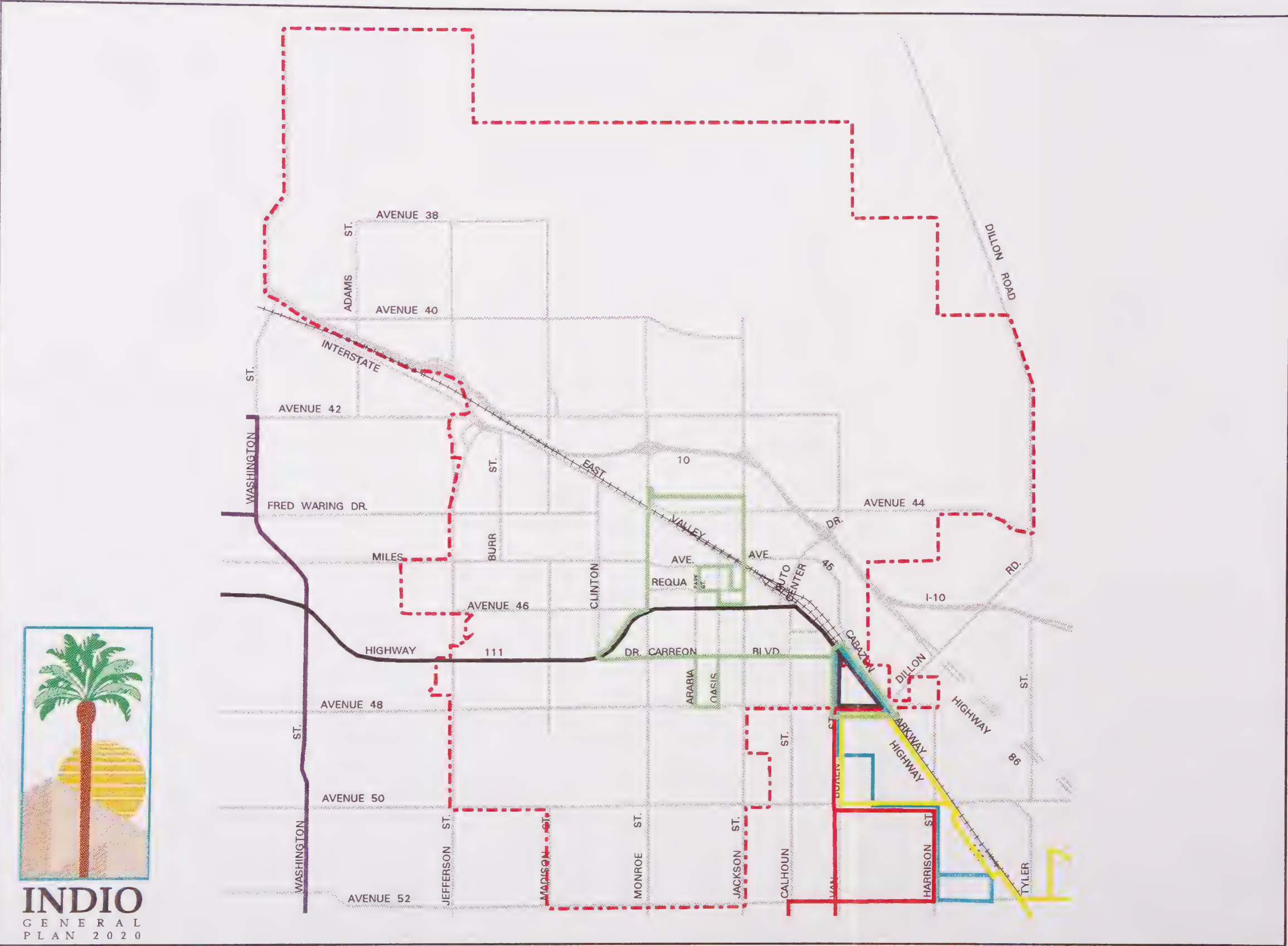
2. definition of a roadway network to serve the zone system,
3. determination of efficient and logical route paths through the network between the individual traffic analysis zones,
4. collection of land use data for each of the traffic analysis zones,
5. determination of trip generation within each traffic analysis zone,
6. determination of distribution of trip-ends between the traffic analysis zones for three individual trip purposes, and
7. assignment of trips to the individual roadway segments of the overall roadway network.

Zone System

To produce a forecast of traffic volumes within the modeling area, traffic must be loaded onto the roadway network in a manner that approximates how real traffic enters and uses the real roadway system. To accomplish this, the Planning Area subdivided into a Traffic Analysis Zone (TAZ) system as shown on Figure 3.2-9.

Each TAZ represents the area where traffic is generated (expressed as a number of trip "productions" and "attractions") by the land uses in that TAZ. During the trip distribution stage of the process, traffic is distributed from each "production" zone to all other zones of the modeling area based on the "attractiveness" of each other zone. In this way, the zones interact with each other. To ensure that there is adequate interaction, the zone system must be subdivided into areas that are small enough to accurately represent the distribution process and the manner in which traffic loads to the roadway network. The Planning Area has been subdivided into 312 zones that are numbered from 30 to 341 for the buildout traffic model.

The Planning Area is tied to the outside world through external zones called cordon stations. Traffic enters and leaves the Planning Area through the cordon stations. In addition, traffic that passes through the Planning Area, but does not interact with it (termed "through" traffic), is represented as traffic



Bus Routes

- Line 70
- Line 80
- Line 90
- Line 91
- Line 92
- Line 111

Source: Sunbus system wide map,
effective August 29, 1993

Figure 3.2-8
SUNBUS EXISTING
BUS ROUTES



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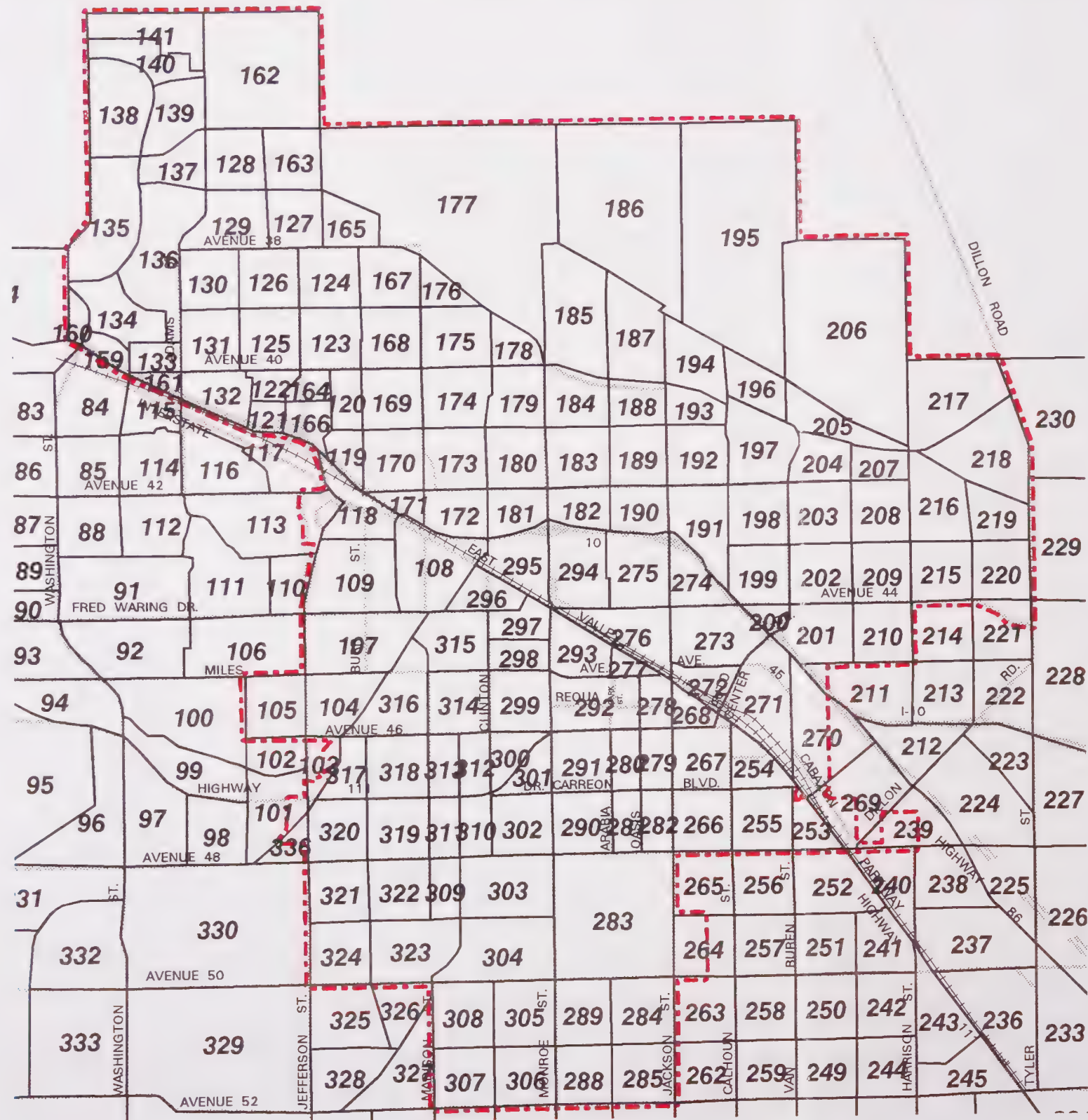
1" = 6000'



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Traffic Analysis Zones

 Traffic Analysis Zone Boundary

Figure 3.2-9
TRAFFIC ANALYSIS
ZONES



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1" = 6000'

that passes directly from one cordon station to another. These "cordons" are assigned trip "productions" and "attractions" in much the same way internal zones are. The buildout traffic model has 24 cordon zones, numbered from 1 to 24.

Roadway Network

The roadway network generally excludes local level streets because it is impractical to model at that level of detail. The network is described in the model as a series of roadway links connected at node points. Traffic generated within each TAZ is introduced to the roadway network through one or more zone "centroid" connectors. These are fictitious roadway links that connect the zone center (the idealized point of zone trip generation) to the arterial roadway system. In a similar manner, cordon zones have special connectors termed cordon links.

Each roadway link is defined in terms of its link end points (nodes), a unique length and a facility code. The facility codes for the network, which define an initial link speed and capacity for each of three assignment periods (a.m., p.m., and offpeak), are listed in Table 3.2-2.

Trip Generation

Trip generation within each TAZ of the modeling area is based on land use data consistent with the land use categories listed in Table 3.2-3. Residential land uses are expressed in dwelling units. All other nonresidential land uses are expressed in net acres.

Trip generation rates for each land use category are shown in Table 3.2-3. Table 3.2-3 also lists daily trip production/attraction splits by trip purpose for each of the proposed land use categories. Trip generation is determined for each of three traditional "trip purposes": home-based work, home-based nonwork, and nonhome-based. The home-based work trip purpose represents all trips made from dwelling units to places of employment, both within and external to the study area. The home-based nonwork trip purpose represents all trips made from dwelling units to nonwork land uses. This includes trips made for purposes such as shopping, doctor visits, banking, recreation, and so forth. The nonhome-based trip purpose includes all trips that

do not have a residence as a point of origin, such as work-related trips from a place of employment and the shipping of manufactured goods. Models sometimes use additional trip purposes on occasion to further refine trip making patterns under unusual circumstances.

INDIO FACTS:

A typical single-family home generates about 10 trips per day.

Trip generation is expressed in terms of "productions" and "attractions." Each trip made in the model has two "trip-ends," a production end and an attraction end. The majority of production trip-ends in the model are related to residential dwelling units; residences have relatively few attraction trip-ends. Regardless of whether the direction of the trip is from the residence to a shopping location or from the shopping location to the residence, it is expressed as a home-based production at the residence end of the trip. Retail land uses, on the other hand, have relatively few production trip-ends; they primarily attract trips made from other land uses.

Trip Distribution

Once the trip generation within each TAZ has been calculated, the distribution of trips between zones where trips are produced and zones where trips are attracted must be determined. In the traffic model, this function is achieved using a "gravity" distribution model. The gravity model is used because it has been demonstrated to perform well and is widely accepted.

The gravity distribution model is based on the well known gravity formula, where the distribution of trips is proportional to the attractiveness of a land use and the distance (or travel time) from the point of trip production. The propensity to favor trips over shorter distances as opposed to trips over longer distances in the distribution process is expressed in terms of a travel time distribution function or curve. A unique distribution curve is used for each of the three trip purposes. These curves reflect the tendency of trips to be made over longer distances

Table 3.2-2

ROADWAY NETWORK FACILITY CODES

Facility Code	Speed	Period Capacity ¹			Type
		A.M.	P.M.	Offpeak	
1	25	20,000	20,000	20,000	Centroid Connector
21	30	1,200	1,800	6,000	1-lane D-Collector
22	25	1,200	1,800	6,000	2-lane U-Collector
23	40	1,200	1,800	6,000	2-lane D-Collector
30	35	2,400	3,600	12,000	4-lane U-Secondary
31	40	2,400	3,600	12,000	4-lane U-Secondary
32	30	2,400	3,600	12,000	4-lane U-Secondary
40	40	3,200	4,800	16,000	4-lane D-Major/Arterial
41	45	3,200	4,800	16,000	4-lane D-Major/Arterial
42	40	3,200	4,800	16,000	4-lane D-Major/Arterial
43	35	3,200	4,800	16,000	4-lane D-Major/Arterial
44	38	3,200	4,800	16,000	4-lane D-Major/Arterial
45	29	3,200	4,800	16,000	4-lane D-Major/Arterial
46	35	3,200	4,800	16,000	4-lane D-Major/Arterial
50	40	4,800	7,200	24,000	6-lane D-Major/Arterial
51	45	4,800	7,200	24,000	6-lane D-Major/Arterial
52	40	4,800	7,200	24,000	6-lane D-Major/Arterial
54	40	4,800	7,200	24,000	6-lane D-Major/Arterial
55	35	4,800	7,200	24,000	6-lane D-Major/Arterial
72	55	7,000	10,500	35,000	2-lane Fwy. (one direction)
73	55	10,500	10,500	35,000	2-lane Fwy. (one direction)
74	55	14,000	21,000	70,000	4-lane Fwy. (one direction)
81	18	2,000	3,000	10,000	1-lane Freeway Ramps
82	18	4,000	6,000	20,000	2-lane Freeway Ramps

¹ Period capacities are derived from Table 3-5 Task 1.1.2 Milestone Report, Documentation of RIVSAN Conversion to TRANPLAN by DKS Associates, February 14, 1991.

Table 3.2-3

LAND USE-BASED VEHICLE TRIP GENERATION FACTORS, RIVERSIDE COUNTY TRAFFIC MODELS

Land Use Code	Description	Daily Trip Rate	Equivalent Trip Rate	Home-Based Work		Home-Based Nonwork		Nonhome Based		Person/ DU	Retail Employees/ Acre	Nonretail Employee/ Acre
				%Ps	%As	%Ps	%As	%Ps	%As			
Residential												
1	HE (0.1 - 0.4 DU/Acre)	12/DU		24	2	51	9	7	7	3.2		
2	CE/EE (0.4 - 2 DU/Acre)	10/DU		24	2	51	9	7	7	3.1		
3	RL (2 - 5 DU/Acre)	10/DU		24	2	51	9	7	7	2.9		
4	RM (5 - 8 DU/Acre)	8/DU		25	1	55	9	5	5	2.7		
5	RH (8 - 14 DU/Acre)	7/DU		25	1	55	9	5	5	2.5		
6	Very High (14 - 20 DU/Acre)	6/DU		25	1	55	9	5	5	2.3		
7	Retirement	4/DU		15	1	35	19	15	15	1.7		
8	Resort Residential	3/DU		10	1	50	19	10	10	1.4		
Commercial												
10	Covenience Commercial (<8 AC)	900/AC	82.6/TSF	0	6	0	50	22	22		23	
11	Neighborhood Commercial (8-15 AC)	700/AC	64.3/TSF	0	6	0	50	22	22		21	
12	Community Commercial (16-40 AC)	500/AC	45.9/TSF	0	10	0	50	20	20		19	
13	Regional Commercial (>40 AC)	360/AC	33.1/TSF	0	10	0	44	23	23		14	
14	Tourist Commercial	300/AC	27.5/TSF	0	10	0	36	27	27		13	
15	Resort Commercial	100/AC	9.2/TSF	0	10	0	36	27	27		5	
16	Commercial Office	240/AC	15.7/TSF	0	35	0	25	20	20		3	75
17	Medical Office	440/AC	33.7/TSF	0	15	0	47	19	19		9	56
18	Mid-Rise Office	480/AC	13.8/TSF	0	35	0	25	20	20		2	140
19	Service/Downton	360/AC	33.1/TSF	0	10	0	44	23	23		14	
Industrial												
20	Business/Industrial Park	180/AC	11.8/TSF	0	43	0	13	22	22		1	45
21	Industrial Park	110/AC	7.2/TSF	0	45	0	11	22	22			31
22	Manufacturing	70/AC	4.6/TSF	0	45	0	11	22	22			16
23	Utilities	10/AC		0	35	0	15	25	25			3
Public/Institutional												
30	High School/Public Schools	60/AC	1.4/ST	0	10	0	70	10	10		2	8
31	Hospital	200/AC	18.4/TSF	0	15	0	55	15	15		6	40
32	General Aviation Airport	4/AC		0	25	0	25	25	25			0.1
33	Government Offices/Public	500/AC	45.9/TSF	0	15	0	45	20	20		5	50
34	Church/Quasi-Public	90/AC	7.7/TSF	0	15	0	45	20	20		0.5	5
Recreation/Open Space												
40	Community Park	40/AC		0	5	0	5	15	15		0.1	0.2
41	Golf Course	8/AC		0	10	0	50	20	20		0.05	0.1
42	Regional Park/Public	5/AC		0	5	0	65	15	15			0.1
43	Agriculture/Mining	1/AC		0	45	0	15	20	20			0.05
50	Mixed Use	180/AC		5	20	10	25	20	20			
DU = Dwelling Units TSF = Thousand Square Feet (Gross Floor Area) Ps = Productions AC = Useable Acres ST = Students As = Attractions												

for employment than for nonemployment purposes, such as shopping.

Each distribution curve is represented in the gravity formula through travel-time friction factors that identify the curve for different elements of time.

The distribution process is performed uniquely for each trip purpose. The end result of the process is a trip table or matrix for each trip purpose that records the trip interaction between zones on a production/attraction basis. Because the production/attraction trip table is not directional, it must be transformed to an origin/destination table through the matrix processes of transposition and factoring. The time period directional factors used in the model are listed in Table 3.2-4. After transposition and factoring, the trip tables are combined into a single trip table for assignment to the roadway network.

Traffic Assignment

Trip assignment is the process by which trip interchanges between zones, determined in the distribution process, are assigned to specific route paths in the roadway network. The end result is a forecast of daily traffic volume on each roadway link.

The route paths are determined by the model based on specified impedances. The impedance usually selected for this process is travel time. The model will determine the route between an origin and destination zone based on the assumption that the impedance is a minimum (i.e., the minimum-time route). The model then assigns the trips specified in the trip table for each origin zone to all destination zones using the minimum-impedance route for each trip interchange.

A number of different assignment techniques may be used in the assignment process to simulate the manner in which traffic actually loads onto a roadway network. One of the most frequently used is a multiple-increment, capacity-restraint technique. In this technique, the assignment process is repeated a specified number of times, each time assigning an incremental percentage of the total trips to all routes that is summed with the previous increment. At the end of each assignment, the assigned volume of each link is compared to its capacity, and the speed of the link is adjusted accordingly. The assignment process is therefore

restrained by the available capacity of each link classification; links that become congested early in the assignment process are given progressively slower speeds, causing trips to be diverted to more favorable (i.e., less congested and higher speed) routes.

The traffic model traffic assignments are based on assignment parameters as listed in Table 3.2-5. The assignments are completed through four increments. The adjustment of link speeds is based on the traditional Bureau of Public Roads adjustment formula.

3.2.9 Traffic Model Validation

To establish the initial ability of the traffic model to simulate the traffic patterns of the Planning Area, a validation assignment of the model is produced. This section of the report discusses the validation results of the existing conditions model. The validation results are compared to 1992 conditions of the roadway network.

Existing (1992) Trip Generation

Existing land use data (1992) for the Planning Area have been collected and organized by TAZ. A listing of land uses and trip generation for existing conditions is included in Appendix B. Trip generation as productions and attractions by zone are also in this appendix.

For 1992, the existing land uses are estimated to generate approximately 812,538 total trip-ends for the total model area. External trips at the cordon stations are estimated to total approximately 143,420 trip-ends. Through-traffic patterns have been studied and through-trips between cordon stations were estimated as shown in Table 3.2-6 for the a.m., p.m., and offpeak periods.

Existing Roadway Network

The existing roadway network has been inventoried and has been presented on Figures 3.2-2 and 3.2-3. Average daily traffic counts for 1992 at selected locations in the network are shown on Figure 3.2-4.

Table 3.2-4

TIME PERIOD DIRECTIONAL FACTORS

Time Period	Home-Based Work			Home-Based Nonwork			Nonhome-Based		
	P-A	A-P	Total	P-A	A-P	Total	P-A	A-P	Total
A.M. Peak	.2898	.0053	.2951	.0677	.0065	.0742	.0295	.0295	.0590
P.M. Peak	.0317	.2980	.3297	.0787	.1569	.2356	.1277	.1277	.2554
Off Peak	.2212	.1640	.3852	.3359	.3543	.6902	.3428	.3428	.6856
Total	.5427	.4673	1.0000	.4823	.5177	1.0000	.5000	.5000	1.0000

Table 3.2-5

ASSIGNMENT PARAMETERS

Increment No.	Assignment Percent	Damping Factor
1	25	---
2	25	0.75
3	25	0.75
4	25	0.75

Existing Conditions Validation Assignment

To evaluate the overall performance of the traffic model, the model can be validated by comparing an assignment based on existing land uses and the existing roadway network to current daily traffic volumes at selected locations along screenlines. Screenlines are line segments perpendicular to the roadways that define key boundaries and corridors through which traffic travels. The model roadways cross these screenlines. Screenlines within the Planning Area have been selected as in Appendix B, Exhibit M.

Traffic volumes forecasted by the existing conditions traffic model are shown on Figure 3.2-10.

A comparison of observed daily roadway volumes to forecasted model volumes at the screenline locations is presented in Table 3.2-7. At each location, the percent deviation is noted along with the recommended allowable percent deviation according to National Cooperative Highway Research Program (NCHRP) Report 255, published by the Transportation Research Board. Report NCHRP-255 defines recommended allowable deviations for both individual sampling locations and screenline totals.

For the model overall, all screenline locations exhibit modeled volumes that are within the recommended values with the exception of one minor location (Screenline 3). The model variance is generally well within acceptable limits. For all screenlines combined, the model is within 7.0 percent of observed volumes. While some individual locations exceed the recommended deviation, these locations are limited and the model forecast is generally on the high side.

Table 3.2-6

A.M., P.M., AND OFFPEAK PERIOD THROUGH-TRIPS
FOR EXISTING CONDITIONS

Cordon Interchange	Volume		
	A.M.	P.M.	Offpeak
1 - 2	160	190	650
2 - 1	100	270	650
1 - 3	50	60	190
3 - 1	30	80	190
1 - 7	170	200	670
7 - 1	100	280	670
1 - 4	110	120	420
4 - 1	50	180	420
2 - 16	110	290	700
16 - 2	170	210	700
2 - 17	90	220	580
17 - 2	40	190	580
4 - 9	40	70	190
9 - 4	40	70	190
7 - 13	1,000	1,770	4,930
13 - 7	1,000	1,770	4,930
7 - 16	180	190	480
16 - 7	280	150	480
7 - 17	80	190	480
17 - 7	400	150	480
7 - 22	120	280	700
22 - 7	170	230	700
8 - 9	30	90	220
9 - 8	60	70	220
8 - 11	30	70	190
11 - 8	50	60	190
14 - 17	30	70	160
17 - 14	40	50	160

Table 3.2-7

INDIO GENERAL PLAN TRAFFIC MODEL
COUNTED AND MODELED AT VOLUMES AT SCREENLINES

Screenline	Count No.	Roadway	Location	Counted ADT Volume	Modeled ADT Volume	Percent Model Deviation	NCHRP-255 Allowable Percent Deviation
1	1	Interstate 10	west of Washington St	45,000	48,300	7.3	22.3
	2	Varner Rd	west of Washington St	2,400	4,400	83.3	59.0
	3	38th Ave	west of Washington St	100	100	0.0	63.0
			Screenline Total	47,500	52,800	11.2	34.2
2	4	Highway 111	west of Washington St	23,300	24,700	6.0	26.5
	5	Miles Ave	west of Washington St	3,400	2,500	-26.5	56.0
	6	Fred Waring Dr	west of Washington St	18,300	15,400	-15.8	28.5
	7	42nd Ave	west of Washington St	4,000	4,500	12.5	51.0
	8	Country Club Dr	west of Washington St	17,300	18,600	7.5	29.0
			Screenline Total	66,300	65,700	-0.9	29.6
3	9	52nd Ave	west of Jefferson St	5,300	12,800	141.5	47.0
	10	50th Ave	west of Jefferson St	5,600	4,800	-14.3	47.0
			Screen Line Total	10,900	17,600	61.5	54.8
4	11	Highway 111	east of Jefferson St	19,200	17,500	-8.9	28.0
	12	Miles Ave	at Whitewater River Crossing	7,500	6,100	-18.7	42.0
	13	Fred Waring Dr	at Whitewater River Crossing	6,900	5,000	-27.5	44.0
	14	Indio Blvd	at Whitewater River Crossing	19,500	29,500	51.3	28.0
			Screenline Total	53,100	58,100	9.4	32.4
5	15	52nd Ave	west of Jackson St	2,700	6,700	148.1	59.0
	16	50th Ave	west of Jackson St	5,600	6,200	10.7	47.0
	17	48th Ave	west of Oasis St	6,800	7,500	10.3	44.0
	18	Dr. Carreon Blvd	west of Oasis St	7,300	7,500	2.7	42.0
	19	Hwy 111	west of Oasis St	18,300	17,100	-6.6	28.5
	20	Requa Ave	west of Oasis St	7,100	4,800	-32.4	42.0
	21	Miles Ave	west of Oasis St	5,700	6,600	15.8	47.0
	22	Indio Blvd	west of Oasis St	22,900	25,700	12.2	26.8
			Screenline Total	76,400	82,100	7.5	27.8
6	23	Market St	west of 45th Ave	1,800	8,100	350.0	62.0
	24	44th Ave	west of Jackson St	8,500	6,600	-22.4	40.0
	25	Interstate 10	west of Jackson St	25,000	24,900	-0.4	26.0
	26	42nd Ave	west of Jackson St	600	200	-66.7	63.0
	27	40th Ave	west of Jackson St	200	200	0.0	63.0
			Screenline Total	36,100	40,000	10.8	38.1
7	28	Hwy 111	east of Jackson St	13,300	14,900	12.0	33.0
	29	Indio Blvd	east of Jackson St	21,500	16,100	-25.1	27.0
	30	45th Ave	east of Jackson St	4,500	5,300	17.8	51.0
	31	44th Ave	east of Jackson St	4,300	6,100	41.9	51.0
			Screenline Total	43,600	42,400	-2.8	35.5
8	32	52nd Ave	west of Van Buren St	4,000	12,400	210.0	51.0
	33	50th Ave	west of Van Buren St	6,400	10,400	62.5	44.0
	34	48th Ave	west of Van Buren St	5,900	5,500	-6.8	47.0
	35	Dr. Carreon Blvd	west of Van Buren St	3,100	4,900	58.1	56.0
	36	Indio Blvd	west of Van Buren St	29,000	17,900	-38.3	25.2
			Screenline Total	48,400	51,100	5.6	33.8

Table 3.2-7

**INDIO GENERAL PLAN TRAFFIC MODEL
COUNTED AND MODELED AT VOLUMES AT SCREENLINES**

Screenline	Count No.	Roadway	Location	Counted ADT Volume	Modeled ADT Volume	Percent Model Deviation	NCHRP-255 Allowable Percent Deviation
9	37	52nd Ave	east of Grapefruit Blvd	3,300	3,300	0.0	56.0
	38	Grapefruit Blvd	south of 52nd Ave	12,000	12,300	2.5	34.0
	39	Interstate 10	east of Dillon Rd	14,200	16,000	12.7	32.0
			Screenline Total	29,500	31,600	7.1	41.1
10	40	Jefferson St	south of 52nd Ave	1,400	3,000	114.3	62.0
	41	Monroe St	south of 52nd Ave	3,100	3,100	0.0	56.0
	42	Jackson St	south of 52nd Ave	4,000	4,000	0.0	51.0
	43	Van Buren St	south of 52nd Ave	1,900	1,900	0.0	62.0
	44	Harrison St	south of 52nd Ave	12,800	12,700	-0.8	34.0
			Screenline Total	23,200	24,700	6.5	43.4
11	45	Washington St	north of 48th Ave	19,700	23,900	21.3	28.0
	46	Jefferson St	north of 48th Ave	11,000	8,200	-25.5	35.0
	47	Madison St	north of 48th Ave	3,600	3,900	8.3	56.0
	48	Monroe St	north of 48th Ave	13,300	15,300	15.0	33.0
	49	Oasis St	north of 48th Ave	2,000	3,600	80.0	59.0
	50	Jackson St	north of 48th Ave	5,200	10,400	100.0	47.0
	51	Calhoun St	north of 48th Ave	2,600	1,900	-26.9	59.0
	52	Van Buren St	north of 48th Ave	2,600	3,900	50.0	59.0
			Screenline Total	60,000	71,100	18.5	31.0
12	53	Indio Blvd	north of Dillon Rd	29,000	16,300	-43.8	25.2
	54	Cabazon Ave	north of Dillon Rd	2,800	3,000	7.1	59.0
	55	SR-86	north of Dillon Rd	5,000	3,800	-24.0	47.0
	56	Interstate 10	north of Dillon Rd	14,700	19,300	31.3	32.0
	57	44th Ave	north of Dillon Rd	1,000	800	-20.0	62.0
			Screenline Total	52,500	43,200	-17.7	32.6
13	58	Monroe St	north of Indio Blvd	6,400	6,700	4.7	44.0
	59	Jackson St	north of Indio Blvd	16,900	16,300	-3.6	30.0
	60	Auto Center	north of Indio Blvd	5,400	6,300	16.7	47.0
			Screenline Total	28,700	29,300	2.1	41.4
14	61	44th Ave	west of I-10	3,900	6,100	56.4	56.0
	62	Auto Center Dr	west of I-10	5,300	5,100	-3.8	47.0
	63	Dillon Rd	west of SR-86	13,200	8,100	-38.6	33.0
	64	50th Ave	east of Tyler St	2,000	2,200	10.0	59.0
			Screenline Total	24,400	21,500	-11.9	42.8
15	65	Washington St	south of Interstate 10	17,800	26,800	50.6	29.0
	66	Indio St	west of Jefferson St	14,100	17,400	23.4	32.0
	67	Monroe St	south of Interstate 10	7,600	7,600	0.0	42.0
	68	Jackson St	south of Interstate 10	4,200	6,200	47.6	51.0
			Screenline Total	43,700	58,000	32.7	35.5

Table 3.2-7

INDIO GENERAL PLAN TRAFFIC MODEL
COUNTED AND MODELED AT VOLUMES AT SCREENLINES

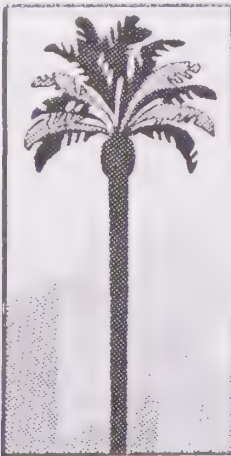
Screenline	Count No.	Roadway	Location	Counted ADT Volume	Modeled ADT Volume	Percent Model Deviation	NCHRP-255 Allowable Percent Deviation
16	69	Washington St	north of Varner Rd	1,500	1,900	26.7	62.0
	70	Adams St	north of Varner Rd	1,300	4,100	215.4	62.0
	71	Jefferson St	north of Varner Rd	800	1,400	75.0	63.0
	72	Madison St	north of 42nd St	200	100	-50.0	63.0
	73	Monroe St	north of 42nd St	2,300	600	-73.9	59.0
	74	Jackson St	north of 42nd St	400	300	-25.0	63.0
			Screenline Total	6,500	8,400	29.2	59.0
17	75	Washington St	north of 38th Ave	2,200	900	-59.1	59.0
	76	Dillon Rd	north of 44th Ave	1,400	1,400	0.0	62.0
			Screenline Total	3,600	2,300	-36.1	62.1

Note: Average daily traffic (ADT) volumes are shown rounded to the nearest 100.




Future Traffic Counts

18.0 (in thousands of
vehicles per day)
18.0 = 18,000



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Figure 3.2-10
TRAFFIC VOLUMES FORECASTED BY
EXIST. CONDITIONS TRAFFIC MODEL

 Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



3.3 INFRASTRUCTURE/PUBLIC SERVICES

3.3.1 Domestic Water

Domestic water service to the Planning Area is provided by the City of Indio Public Services Department and the Coachella Valley Water District (CVWD). Figure 3.3-1 shows the approximate current service boundaries of these two agencies. The service area boundary between the two jurisdictions has not been clearly established, and it is a goal of the City to resolve this conflict.

According to the Indio Public Services Department, the City of Indio's water service boundary extends to the City limits. However, some areas within the City limits are currently served by CVWD. It is a policy of the City of Indio to provide water service to all properties within the City limits and sphere of influence whenever feasible.

CVWD provides domestic water service within the Planning Area to properties currently under the jurisdiction of Riverside County. Within the Planning Area, CVWD provides service to properties that are located north of I-10 and west of Madison Street, and to properties that are south of I-10 and west of Jefferson Street. CVWD also provides water service to a subdivision located within the City limits, located generally north of Fred Waring Drive, south of Indio Blvd, and west of Burr Street.

City of Indio

The primary source of water for the City of Indio comes from groundwater aquifers. The City's water table is approximately 70 to 100 feet deep. The City owns and operates 11 wells and 3 reservoirs, as shown on Figure 3.3-1. Each of the City's three reservoirs has a capacity of 2 million gallons, providing the City with a total capacity of 6 million gallons of storage. Reservoir No. 1 is located on Avenue 45, east of Jackson Street; Reservoir No. 2 is on Crown Way east of Sherwood Drive; and Reservoir No. 3 is at the terminus of Garden Avenue, east of Monroe Street. Each well is capable of supplying 1,500 to 2,000 gallons per minute (gpm). A fourth 2-million-gallon reservoir is at the northwest corner of Shieklo and Avenue 46.

Water lines are located throughout the City ranging from 6 to 18 inches in diameter. City of Indio water lines extend across I-10 and the Coachella Valley Stormwater Channel (Whitewater River) in four locations: Monroe Street, a 12-inch line; Jackson Street, a 12-inch line; Avenue 44 a 10-inch line; and Auto Center Drive, a 12-inch line. Water lines cross the Southern Pacific Railroad in three locations: Monroe Street, an 18-inch line; Jackson Street, a 12-inch line; and Avenue 48, a 10-inch line.

The City does not operate any domestic wells north of I-10. Plans to extend additional water mains to the northern portion of the Planning Area are currently being developed.

The City of Indio consumes an average of 12,120 acre-feet of water per year, approximately 300 gallons per day per resident including fire flow. The existing water supply is adequate to serve the City's population.

INDIO FACTS:

*On average, each
resident uses
300 gallons of water
per day.*

The City has a policy to encourage the use of drought-tolerant landscaping and desert plants to encourage water conservation. Reclaimed water is not currently used within the City, and there are no immediate plans for the City to use reclaimed water for public areas such as medians and parks.

Coachella Valley Water District

CVWD pumps groundwater directly into its water system. Currently, the pressure zone boundaries are under revision and the number and locations of wells servicing this portion of the Planning Area cannot be identified at this time. However, CVWD has indicated that it has sufficient water supply for domestic use and fire protection.

It is CVWD's policy to provide water service on demand and to expand and design the water system as development occurs. To service new subdivisions and commercial projects in the portion of the Planning Area served by CVWD, more wells

and storage facilities will be needed, as well as major water line extensions (generally 18 inches or larger). For facility planning and sizing, CVWD assumes an average of 2.6 gpm, per day for all residential, commercial, and industrial consumers.

To encourage water conservation, CVWD promotes the use of drought-tolerant landscaping and has plans for using reclaimed water in large planned developments. CVWD has an irrigation specialist on staff to work closely with developers to implement its landscaping and open space plans.

3.3.2 Wastewater

Valley Sanitary District (VSD) and CVWD are the sewer service purveyors for properties within the General Plan Planning Area. Figure 3.3-2 shows the current service boundaries for these two utilities.

Valley Sanitary District

VSD owns and operates a sewage treatment plant located at Van Buren Street and Cabazon Road (see Figure 3.3-2). This treatment plant currently has the capacity to treat up to 7.5 million gallons per day (mgd) with a secondary level of treatment. The plant is currently operating at 4.3 to 4.7 mgd. According to VSD, the treatment plant's capacity can be expanded to handle up to 11.5 mgd by using a ponding system.

For planning purposes, VSD projects that for every 10,000 persons, 1 million gallons of sewage are generated per day (100 gallons/person/day). The final effluent from the treatment plant outlets into the CVWD.

VSD has sewer lines throughout the City ranging in size from a 6- to a 48-inch main line in Van Buren Street to the treatment plant. Wastewater from the northern portion of the City and Shadow Hills area is transported to the treatment plant via a 15-inch sewer line crossing I-10 and channel at Van Buren Street. This 15-inch line has the capacity to transport 2.0 mgd and is currently operating at approximately 500,000 gallons per day (25 percent of capacity).

INDIO FACTS:

The Planning Area is served by two agencies: Valley Sanitary District and Coachella Valley Water District.

Each person generates an average of 100 gallons of wastewater per day.

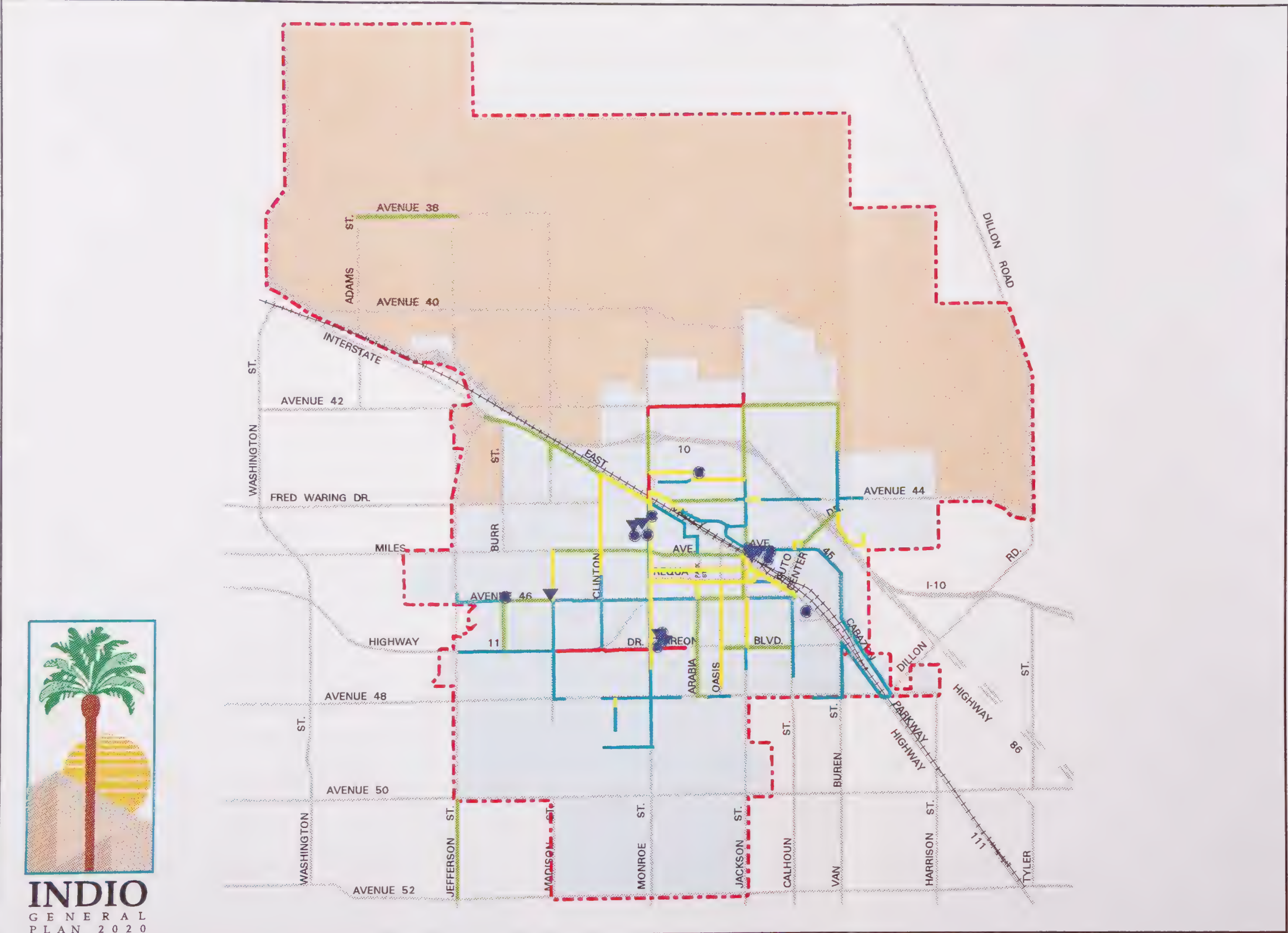
A lift station is located at Avenue 48 and Bataan Street to pump the wastewater from the southeastern portion of the City to the treatment plant. A second lift station is under construction in the Shadow Hills area, generally north of I-10, between Jackson and Van Buren Streets.

Almost all properties within the City of Indio are served by sewer. The Indio Municipal Golf Course, various scattered residential units in the Shadow Hills area, and a mobile home park located north of Avenue 48, east of Jefferson Street, are all on septic systems.

Coachella Valley Water District

CVWD provides sewer service to a portion of the Planning Area outside of the City limits and generally located west of Madison Street and north of I-10. The Indio Ranchos area, which is within the City limits, is served by CVWD.

CVWD has a water reclamation plant at Madison Street and Avenue 38. This reclamation plant is known as "Warp 7" and currently has the capacity to treat 700,000 gallons of wastewater per day using a tertiary level of treatment. Approximately 400,000 gallons per day of wastewater are currently being treated at this facility (57 percent of capacity). Plans are underway to expand Warp 7 to its ultimate



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Explanation

WATER FACILITIES

- 6 and 8 Inch Pipelines
- 10 Inch Pipelines
- 12 Inch Pipelines
- 14 and 16 Inch Pipelines

Wells

Reservoirs

WATER DISTRICTS

- City of Indio
- CVWD

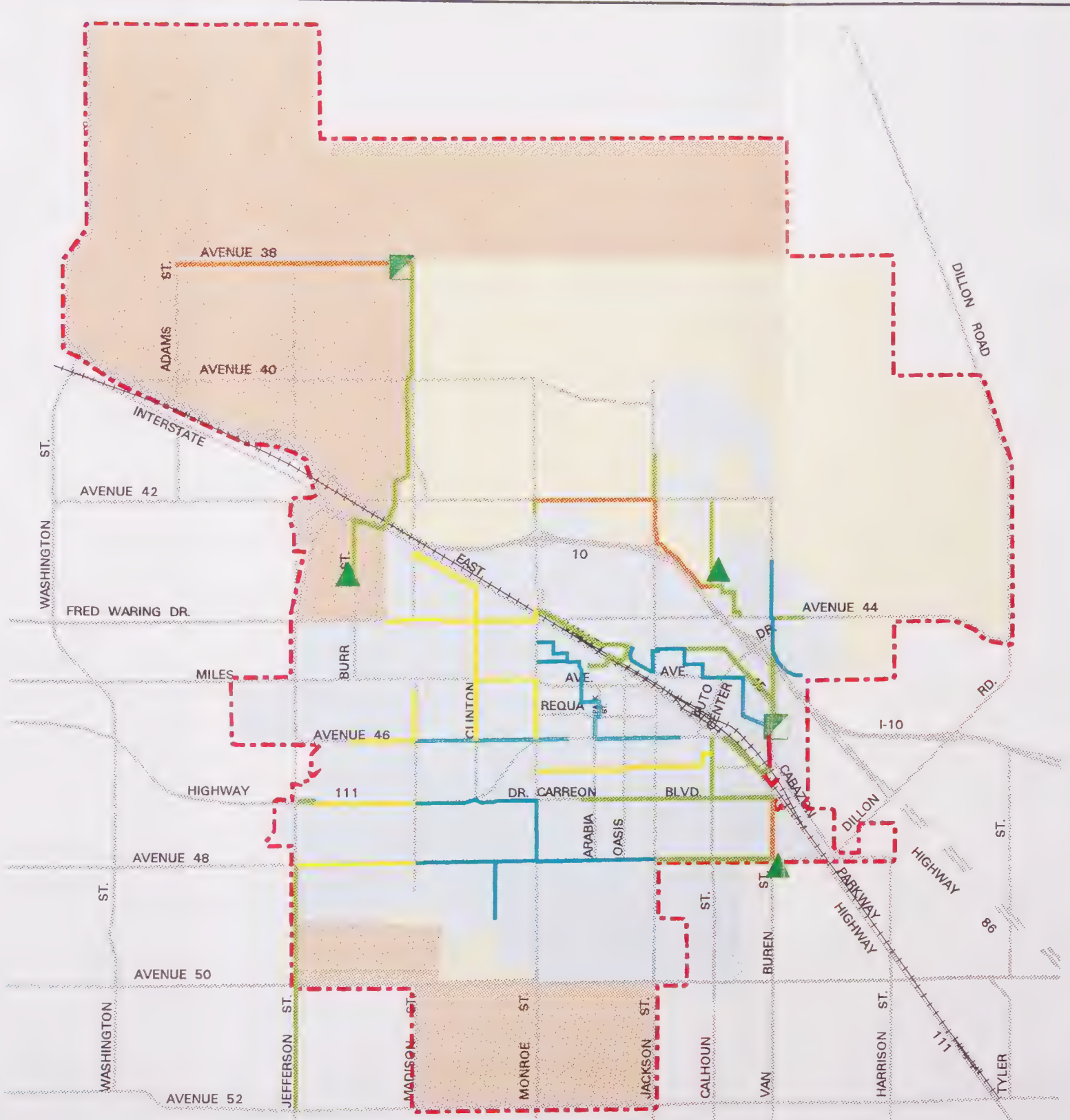
Figure 3.3-1
WATER FACILITIES AND
DISTRICT BOUNDARIES



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'



Explanation

SEWER FACILITIES

- 8-inch pipes
- 10-inch to 12-inch pipes
- 15-inch to 20-inch pipes
- 27-inch to 30-inch pipes
- 42-inch + pipes

- Pumping Stations
- Sewage Treatment Facilities

SEWER DISTRICTS

- Valley Sanitary District (VSD)
- Valley Sanitary District Sphere of Influence
- CVWD

Figure 3.3-2
SEWER FACILITIES AND
DISTRICT BOUNDARIES



INDIO
GENERAL
PLAN 2020

Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

capacity of 20 mgd. The expansion will be constructed on an 80-acre parcel. This will be a multiphase expansion with the first phase capable of handling 2.5 mgd and scheduled to be operational in 1994. This treatment plant will serve the new Del Webb Sun City project and will provide that project with reclaimed water for irrigating the golf course. A lift station will need to be constructed to pump wastewater from Fred Waring Drive (Avenue 44), north to the reclamation plant.

3.3.3 Flood Control/Drainage

Section 3.3.3 discusses local and regional flood control facilities within the Planning Area. A discussion of the nature of flood hazards within the Planning Area and applicable flood safety programs is included in the Flood Hazards portion of the Public Health and Safety section (see Section 5.6).

Within the Planning Area, flood control management is the responsibility of the City of Indio's Public Services Department and CVWD.

Existing CVWD Regional Flood Control Facilities

The four major regional storm drain facilities within the Planning Area are the Coachella Valley Stormwater Channel (CVSWC) (Whitewater River), the Thousand Palms Wash, Detention Channel No. 3, and the East Side Dike. The location of each facility is shown on Figure 3.3-3 and is described below.

- ▶ **Coachella Valley Stormwater Channel.** The CVSWC, also referred to as the Whitewater River, is a 500-foot \pm wide improved dirt channel that loops around the northern part of the City. This channel, which has a design capacity of 75,000 cubic feet per second (cfs) (Standard Project Flood), conveys most of the water from the tributary drainage basins to the lower areas near the Salton Sea.
- ▶ **Thousand Palms Wash.** The Thousand Palms Wash is a northerly tributary that connects to the CVSWC and intercepts portions of storm runoff from the outlying Thousand Palms Canyon watershed. This improved channel is

approximately 1 mile long and is maintained by CVWD. There are currently plans to extend this channel northwesterly as a part of CVWD's ongoing flood control improvement projects. The recommendations for this extension are outlined in a report prepared by Bechtel Corporation and Terra Nova Planning and Research, Inc.; however, a precise location has not been determined.

- ▶ **Detention Channel No. 3.** Detention Channel No. 3 extends northward from the CVSWC and is located near the easterly edge of the Planning Area. This storm drain channel is a part of the CVWD stormwater reclamation facilities. The channel is designed as a spillway facility that collects water from the East Side Dike and delivers it to the CVSWC.
- ▶ **The East Side Dike.** The East Side Dike, which parallels the All American Canal, was constructed with federal funds by the Bureau of Reclamation in the late 1940s. This dike protects the Coachella Branch of the All American Canal and the valley cities and farms from southeast of Mecca to northwest of Indio. The levee forms a series of detention reservoirs to store and retain several thousand acre-feet of storm runoff (an acre-foot is equal to 326,000 gallons). The levee was built as a part of Improvement District No. 1 and is maintained by CVWD.

City of Indio Facilities

The storm drainage system in the City of Indio was constructed over a period of time, and a drainage area Master Plan update is needed. As a result, portions of the storm drain system within the Planning Area have insufficient capacity to carry the 100-year flood event due to obstructions, undersizing, and general layout. A detailed storm drain system inventory is needed to analyze problem areas and identify future improvements, including maintenance needs. Several retention facilities within the Planning Area do not have detailed 100-year flood routing studies to determine whether the existing systems are adequate for this event. A detailed flood routing plan is also recommended for the City's basin system.

The City's storm drain system inventory includes, but is not limited to, the following facilities:

- ▶ several corrugated metal pipe (CMP) culverts ranging from 60 to 84 inches in diameter that drain stormflows under I-10 into the CVSWC;
- ▶ A 6,000-foot ± corrugated steel pipe (CSP) storm drain of 60 to 72 inches in diameter located in Avenue 45 and discharging into the CVSWC;
- ▶ A 3,000-foot ± reinforced concrete pipe (RCP) storm drain of 48 inches in diameter in Monroe Street and discharging into the CVSWC;
- ▶ A 1,300-foot ± CSP storm drain of 48 inches in diameter paralleling the Southern Pacific Railroad joining the Avenue 45 drain;
- ▶ A 1,300-foot ± RCP storm drain of 36 inches in diameter in Miles Avenue and discharging into the CVSWC;
- ▶ A 2,000-foot ± RCP storm drain of 36 inches in diameter in Aztec Street, joining a 66-inch CMP culvert, that drains under I-10;
- ▶ A 7,000-foot ± irrigation pipe of 27 inches in diameter used for stormwater in Avenue 44 discharging into the CVSWC;
- ▶ Numerous 8- to 24-inch-diameter storm drain facilities throughout the City's incorporated boundary.

The City of Indio implements stormwater storage through several retention basins and dry well catch basins. These facilities can be found in many of the new subdivisions within the City. These basins serve a dual purpose: stormwater retention and park/open space areas. Maintenance of these facilities is under the jurisdiction of the City's Public Service Department.

Highway 111, which is under Caltrans's jurisdiction, and Avenue 48 are major stormwater carriers for surface flows and are frequently inundated during peak storm runoff intervals.

3.3.4 Solid Waste

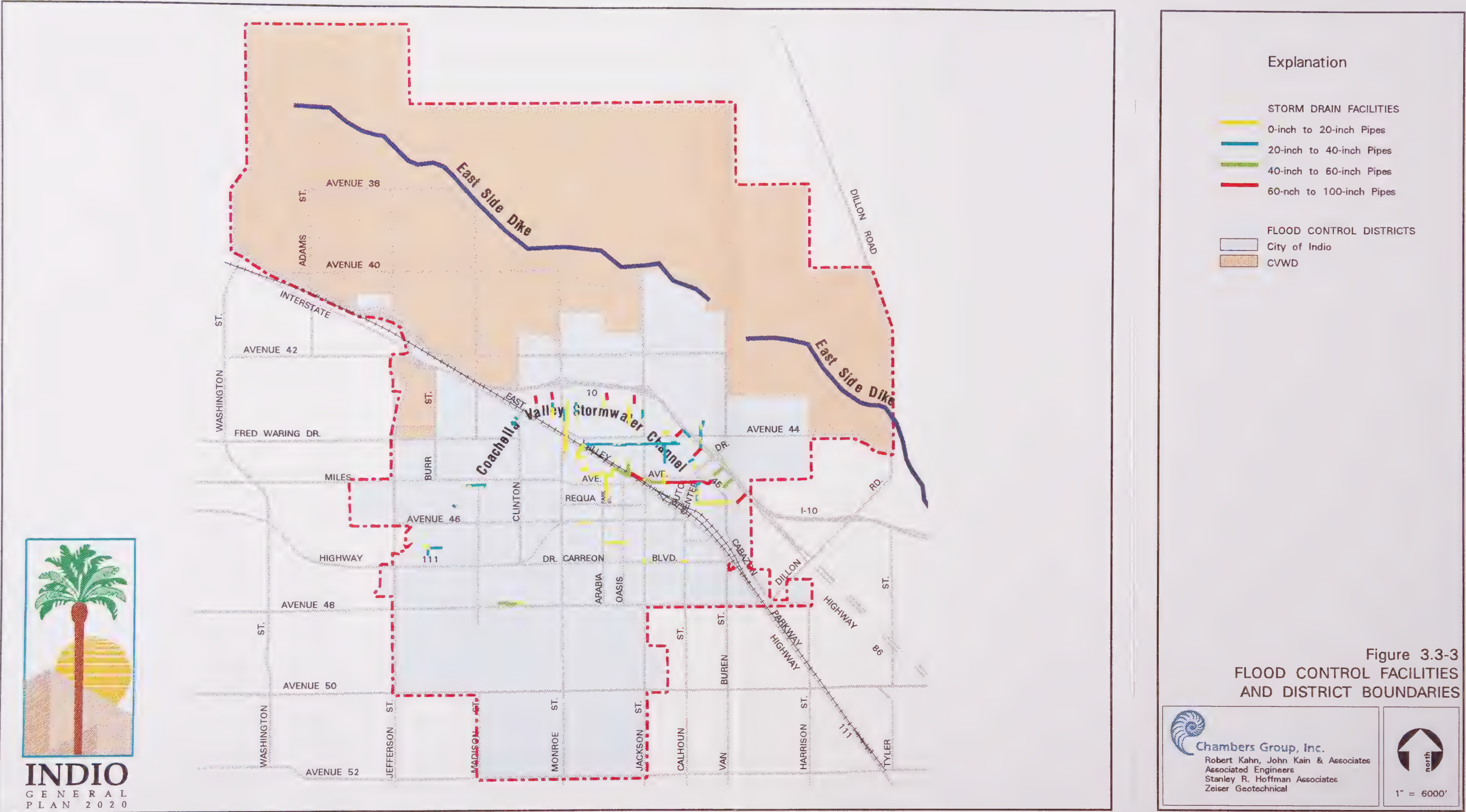
Collection

Solid waste services to the City of Indio are provided by Waste Management of the Desert. Within the City itself, Waste Management offers residential curbside, commercial, and rolloff (industrial) waste collection. Waste Management has a Rubbish Hauling Franchise Agreement with the City of Indio that is currently under renegotiation. Under the current franchise agreement, the City collects a 10-percent franchise fee.

Within the unincorporated portions of the Planning Area, two active permittees are allowed to serve the area: Waste Management of the Desert or Western Waste Industries. At the current time, there is no formal boundary map for this area, and service areas will need to be devised as the area develops.

Based in Palm Desert, the Waste Management of the Desert facility processes solid waste from six of nine cities in the Coachella Valley, with total collections of approximately 850 tons/day. Of the total collection, approximately 170 tons/day (20 percent), come from collections within Indio. At the Palm Desert facility, waste stream recycling is conducted, and all nonrecyclable waste is hauled to the Coachella Landfill. A curbside recycling program in Indio which serves approximately 2,500 households and is expected to be expanded. Overall, the center recycles approximately 2 tons per day in its service area (personal communication, R. Burke 1991).

In general, according to the County of Riverside Waste Management Department, the Coachella Valley is generating solid waste at a rate of 12.44 pounds per person per day. This figure represents an aggregated figure that includes residential, commercial, and industrial land uses.



INDIO FACTS: *Each resident generates an average of 12.44 pounds of solid waste per day.*

INDIO FACTS: *Indio currently generates about 170 tons of solid waste per day. This is over 62,000 tons per year.*

The landfill used by Indio is expected to be filled by the year 2014.

Landfill Facilities Serving Planning Area

As stated above, solid waste from the City of Indio is hauled to the Coachella Sanitary Landfill located at 87011 Avenue 44, east of the City of Coachella. This 640-acre landfill is owned by the Bureau of Land Management and operated by the Riverside County Waste Management Department. The landfill also serves the Cities of Coachella, Indian Wells, and La Quinta as well as the communities of Bermuda Dunes and Thermal.

The Coachella Landfill is classified as a Class III landfill, which means that the site does not accept hazardous waste. Currently, no landfills within Riverside County will accept hazardous wastes. Coachella Landfill will, under special conditions, accept specific designated wastes. Designated wastes are defined as nonhazardous wastes that consist of or contain pollutants that under ambient environmental conditions at a landfill may cause degradation of the water quality in the area (S. Ma, personal communication 1992). The Coachella Landfill, which was opened in 1972, had an initial capacity of 50 million tons. Permit revisions are currently underway, and due to the discovery of faults on the proposed landfill expansion area, the total area available for landfill has been reduced. Originally, the life expectancy of the landfill was 26 years. New calculations estimate a life expectancy of 22 years (to 2014) with 9 million tons of capacity remaining. The landfill has a permitted capacity of 2,000 tons per day, but was operated at much less in 1991 (S. Ma, personal communication 1992).

The next closest landfill to the City of Indio is the Edom Hill Landfill located at 70-100 Varner Road in Cathedral City, which has an estimated closure date of 2019 (Riverside County Solid Waste Management [RCSWM] 1989).

Source Reduction

The California Integrated Solid Waste Management Act of 1989 (AB939) requires counties and cities to prepare, adopt, and implement recycling and source reduction elements for their General Plans, and prepare integrated waste management plans. By January 1, 1995, 25 percent of the waste stream must be diverted by source reduction, recycling, or reuse (such as composting). This mandatory reduction figure increases to 50 percent by January 1, 2000. The California Waste Management Board's goal is to reduce the total amount of residential, commercial, and industrial wastes disposed of in landfills. Resource recycling is a beneficial way to reduce the amount of waste being received at disposal sites.

INDIO FACTS: *Indio, like all California cities, must reduce the amount of waste it sends to the landfill by 25% by 1995, and 50% by the year 2000.*

3.3.5 Electricity

Imperial Irrigation District (IID) provides electrical service to the Planning Area. Southern California Edison (SCE) also has regional transmission facilities within the Planning Area. Major facilities for both utilities are shown on Figure 3.3-4.

Imperial Irrigation District

IID supplies electricity to the Planning Area. The IID headquarters are located in El Centro, with the area office located in La Quinta. The majority of the electricity provided by IID to the Planning Area is supplied by a steam generation plant in El Centro, with additional power supplied by the Bureau of Reclamation (Hoover Dam) and vertical drops at select locations along the All American Canal. To supplement the sources of power during peak periods, electric loads switch to gas or oil generators located in the City of Coachella.

IID has four types of line: 12.5/7.2-kilovolt (kV) distribution lines and 92-, 161-, and 230-kV transmission lines. The majority of the 12.5/7.2 kV lines are above ground and located throughout the City. The City and IID have a policy requiring all new distribution lines to be placed underground. No such policy exists for the transmission lines because undergrounding is not feasible. These lines are located on Monroe, Jefferson, Jackson, and Van Buren Streets; Avenues 42, 44, 48 and 52; Dillon Road; and Highway 86 (East Valley Parkway). Many transmission lines, especially those north of I-10, will require relocation if street widening is required in the future.

Twelve substations are located in the Planning Area, as follows: Coachella Valley (1984), Avenue 52 (1985), Coachella (1929), Van Buren (1971), Jackson (1982), Avenue 48, (1969), Carreon (1989), Jefferson (1985), La Quinta (1990), Avenue 42 (1990), Monroe (1970), and Indio. The Indio substation is an older substation located near City Hall. This substation is outdated and may be taken out of service in the near future. A new substation is proposed at Avenue 44 and Jefferson Street (Shield 1991) and at Avenue 38 and Madison Street (Avenue 38, 1992). A substation is also needed north of I-10 in order to serve the approved Pacific

Indio project and other new projects in the Shadow Hills area.

IID can service new development on demand. Prior to the installation of new service lines, a "developer's letter" must be executed. IID will review the proposed plans and charge the appropriate extension and installation fees. Conduit systems, including vaults, pull boxes, transformer pads, switch vaults, and so forth, are not included in the District's fees. The City of Indio's Public Services Department determines the street light locations for all projects under their jurisdiction.

IID has anticipated the growth in the Planning Area, and its system has been designed to grow with Indio in the future. According to the IID 1991 Annual Report, customers within the Planning Area consume electricity at the rates shown on the following inset.

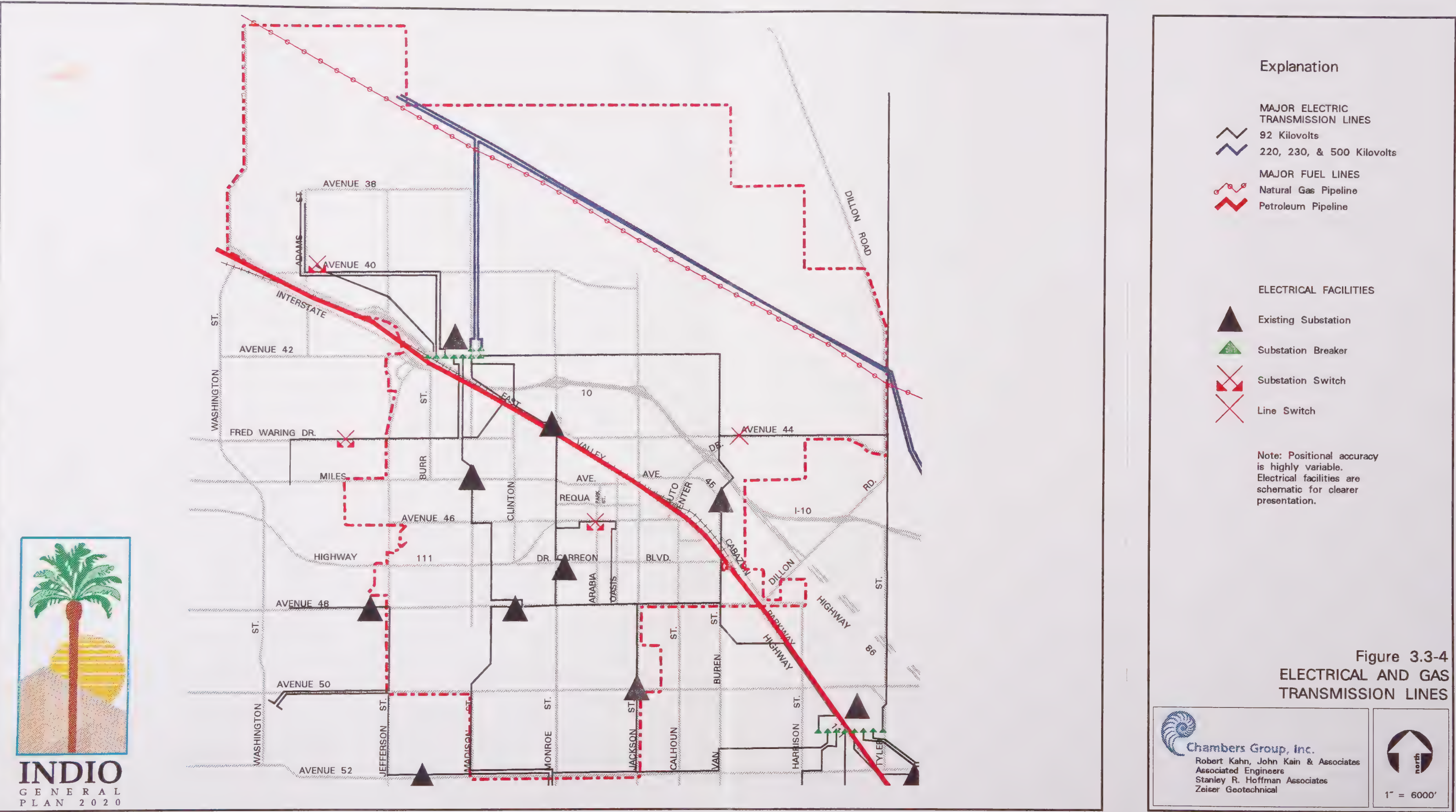
The electric supply is sufficient to service the future needs of the Planning Area.

INDIO *Electric Use by Land* FACTS: *Use* (kilowatt hours/year)

<i>Residential</i>	<i>11,877</i>
<i>Agricultural</i>	<i>92,140</i>
<i>Comm. (Small)</i>	<i>23,829</i>
<i>Comm. (Large)</i>	<i>366,224</i>

Southern California Edison

SCE does not have any electric distribution lines in the Planning Area (i.e., it does not directly serve customers within the Planning Area). Its service area boundary ends on the west side of Washington Street. SCE does have a major transmission corridor, in the Indio Hills north of the East Side Dike (see Figure 3.3-4). Within the corridor there are three regional transmission lines. IID owns the 230 kV line with a proposed line extension to the Monroe Street substation in 1994.



INDIO
GENERAL
PLAN 2020

The other two lines, a 500- and a 220-kV line, are owned by SCE. The source of power for the 500-kV line is a nuclear power plant in Arizona, Palo Verde No. 1. Power for the 220-kV line is from the Metropolitan Water District of Southern California (MWD) pumping plant near Desert Center.

The majority of this transmission corridor is owned in fee by SCE. The width of the corridor varies; however, there is enough area to place an additional 500-kV transmission line in the future. Plans for a future line in that area are currently on hold.

3.3.6 Natural Gas/Petroleum Transmission

Southern California Gas Company (SCG) provides natural gas service to the entire Planning Area, with gas distribution lines located throughout the Planning Area. Gas lines can be extended to outlying areas on demand in accordance with the Company's policies and the California Public Utilities Commission.

Consumption

SCG estimates the typical demand as follows:

INDIO FACTS:	<i>Natural Gas Use by Land Use (therms/unit/year)</i>	
	<i>Single Family</i>	<i>799</i>
	<i>Multifamily</i>	
	<i>≤4 units</i>	<i>482</i>
	<i>>4 units</i>	<i>483</i>

Typical demand averages for commercial and industrial users are not available because construction materials and types of equipment used to construct these facilities vary greatly. SCG has developed several programs to provide assistance in selecting the most effective applications of energy conservation techniques for a particular project.

Local and Regional Distribution

High-pressure distribution gas lines are generally located in the following areas:

- ▶ An 8-inch, high-pressure line extends northwesterly along the Southern Pacific Railroad through the Cities of Thermal and Coachella to Avenue 50. This line transitions to a 4-inch, high-pressure line and extends to the west along Avenue 50 and transitions to a 4-inch distribution line near Avenida Plata. A 4-inch, high-pressure line extends north long Jackson Avenue for approximately 500 feet from the line along Avenue 50.
- ▶ A 6-inch, high-pressure line extends along Highway 111 generally between Jefferson and Madison Streets.
- ▶ A 4-inch, high-pressure line extends northwesterly along the Southern Pacific Railroad between Monroe and Clinton Streets. This line transitions to a 4-inch distribution line that crosses under the CVSWD. A 6-inch, high-pressure line extends from this line north along Monroe Street to Avenue 42. This line continues east along Avenue 42 and connects to a 4-inch distribution line in Jackson Street. The high-pressure line in Monroe Street is the only gas line crossing of the White Water River and I-10 within the Planning Area.

SCG also has three regional gas transmission lines within the Planning Area: "Lines 2000 and 2001," are both 30-inch lines, and "Line 2051," a 36-inch line. These lines are located in an easement adjacent to the SCE transmission lines in the Indio Hills north of the East Side Dike (see Figure 3.3-4).

In addition to major natural gas transmission lines, the Planning Area also contains two major petroleum transmission lines. Both of these high-pressure lines, a 12- and a 20-inch, run through a corridor alongside the railroad tracks and connect Texas to San Pedro in California. At the present time, the 12-inch line is not being used. The location of these two lines is shown as a single line on Figure 3.3-4.

3.3.7 Telephone

General Telephone and Electric Company

Telephone service to the Planning Area is provided by General Telephone and Electric Company (GTE). GTE telephone lines are located throughout the Planning Area, and service is provided on a demand basis. GTE tries to coordinate the installation of its facilities with other utility companies in order to run its cables along side other company lines in the same trench. Unless a plant facility is needed, GTE will provide the funds to supply telephone services to the site directly, or a reimbursement agreement with the developer will be prepared. GTE requires that all new improvements be placed underground; however, in rural areas, aerial lines may be permitted.

GTE is constantly upgrading its system in order to offer its customers the latest technology. The Planning Area is on the "Indio Switch," which provides all the special calling features such as call forwarding, call waiting, 3-way calling, and so forth. GTE has future plans for an Integrated Digital Switching Network. This is "state-of-the-art" technology that will be compatible with personal computers.

GTE has plans to extend service to the Shadow Hills area. The line at I-10 and Jackson Avenue will be extended north to Avenue 42 than west to Monroe Street. A 2- to 3-acre site will be needed in this area for a plant facility. This extension will require the installation of a manhole conduit system, a switching system, and a major switching unit.

A new remote switching unit is located at Avenue 48 and Jackson Street. To handle anticipated growth in the area, two new remote switching units will be needed. Upgrades to the Avenue 44 switching unit located at Avenue 44 and Harrison Street are scheduled for 1993. GTE is currently upgrading all of its lines to a fiber-optic network.

Long Distance Service

MCI, AT&T, and U.S. Sprint provide long distance telephone service to the Planning Area. U.S. Sprint has a fiber-optic line located on the north side of

I-10. This line is Sprint's main east/west line in the southern United States. This line is buried approximately 40 to 50 inches deep and is not encased. U.S. Sprint should be contacted prior to any construction near its line.

3.3.8 Cable Television

Colony Cablevision provides cable service to the Planning Area. Colony Cablevision has lines extended throughout the area, and service extensions are provided as development occurs. Currently, there is a cable line crossing I-10 at Avenue 44, east of Jackson Avenue. Cable lines in the past were installed both above and below ground. However, in the future all lines will be required to be placed underground with other utilities.

Currently, Colony Cablevision offers 36 channels, including all major pay channels (Disney, HBO, Showtime, and so forth). In the near future, an additional 5 to 16 channels will be provided. New fiber-optic facilities are currently being installed throughout the service area. These fiber-optic lines will eliminate the need for converter boxes to obtain pay-per-view channels.

3.3.9 Other Communications

Cellular Telephone

Pac-Tel and L.A. Cellular offer cellular telephone service to the Planning Area. Cellular communication is based on a grid of antennas, or cells, spread over a specific geographic area to maintain continuous communications. Each cell contains a radio transmitter and control equipment located in a building called a "cell site." Cell sites are connected to a central computer called the Mobile Telephone Switching Office (MTSO). The MTSO connects the cellular phone transmission with the local telephone company, which completes the call. L.A. Cellular and Pac-Tel have cell sites located in the Planning Area. However, the locations of the sites are confidential and are not generally made public.

Cellular telephone antennas are also located throughout the City. The locations of these

antennas were generally based on topography and other land form constraints. For cellular service to work, there needs to be a "line-of-sight" relationship between the antenna and the cellular telephone. Whenever feasible, antennas are located adjacent to compatible land uses such as near existing tall power lines, microwave facilities, antenna farms, and water treatment facilities.

Microwave Repeater Facilities, Radio Towers, and So Forth

Indio Peak is a prominent peak in the Indio Hills and is located north of the Planning Area, approximately 5 miles north of Tarmac Sand and Gravel, at an elevation of 2,200 feet. Several telecommunication facilities are installed on this hill including antennae towers, microwave, and satellite dishes.

3.4 COMMUNITY SERVICES

3.4.1 Schools

The General Plan Planning Area is served by two school districts: the Desert Sands Unified School District (DSUSD) and the Coachella Valley Unified School District (CVUSD). As shown on Figure 3.4-1, the DSUSD covers the vast majority of the Planning Area, with only an approximate 4-square-mile area in the south end of Indio being served by the CVUSD.

Desert Sands Unified School District

The DSUSD, which also serves communities to the west of Indio, contains a total of 12 elementary schools, 5 middle schools, and 3 high schools. Total enrollment for the two high schools, intermediate schools, and three elementary schools serving the Planning Area was 11,431 as of the week ending May 28, 1993. Capacity enrollments and average classroom sizes for schools serving the Planning Area are listed in Table 3.4-1. Most of the schools have enrollments that exceed capacity. The remaining students in these cases are housed in leased facilities (portables). The DSUSD facilities within the Planning Area are shown on Figure 3.4-1.

DSUSD has experienced continual growth over the last decade, with the growth rate peaking during the 1987-88 school year at over 8 percent. Growth has slowed since then, with the latest figures for the 1991-92 school year showing a growth rate of 4.75 percent. Newer schools, including La Quinta Middle School and James Madison Elementary School, showed tremendous growth in 1992 from the previous year. Indio Middle School opened in September 1992. Currently, a new high school has been sited to be constructed in La Quinta and is scheduled to open in September 1994 (DSUSD, personal communication 1992). The district is also planning an additional middle school on Avenue 42 in Bermuda Dunes (meeting with DSUSD 1993).

Coachella Valley Unified School District

The CVUSD borders the DSUSD on the south and east. Two schools in the CVUSD serve parts of the Planning Area as shown on Figure 3.4-1. These are

Westside School and Coachella Valley High. Westside School (K-8) is located in Thermal at 82-225 Airport Boulevard. The built capacity for this facility is 710. Capacities, enrollments, and average classroom sizes for schools serving the Planning Area are presented in Table 3.4-1. Portable buildings have been added to accommodate the additional students. Coachella Valley High (9-12) is located in Coachella and in 1992 had an enrollment of 2,027 and has a built capacity of 1,650. Portables are in use at this facility also. A reconstruction project is underway at this school to accommodate the additional students (CVUSD, personal communication 1992).

INDIO FACTS:

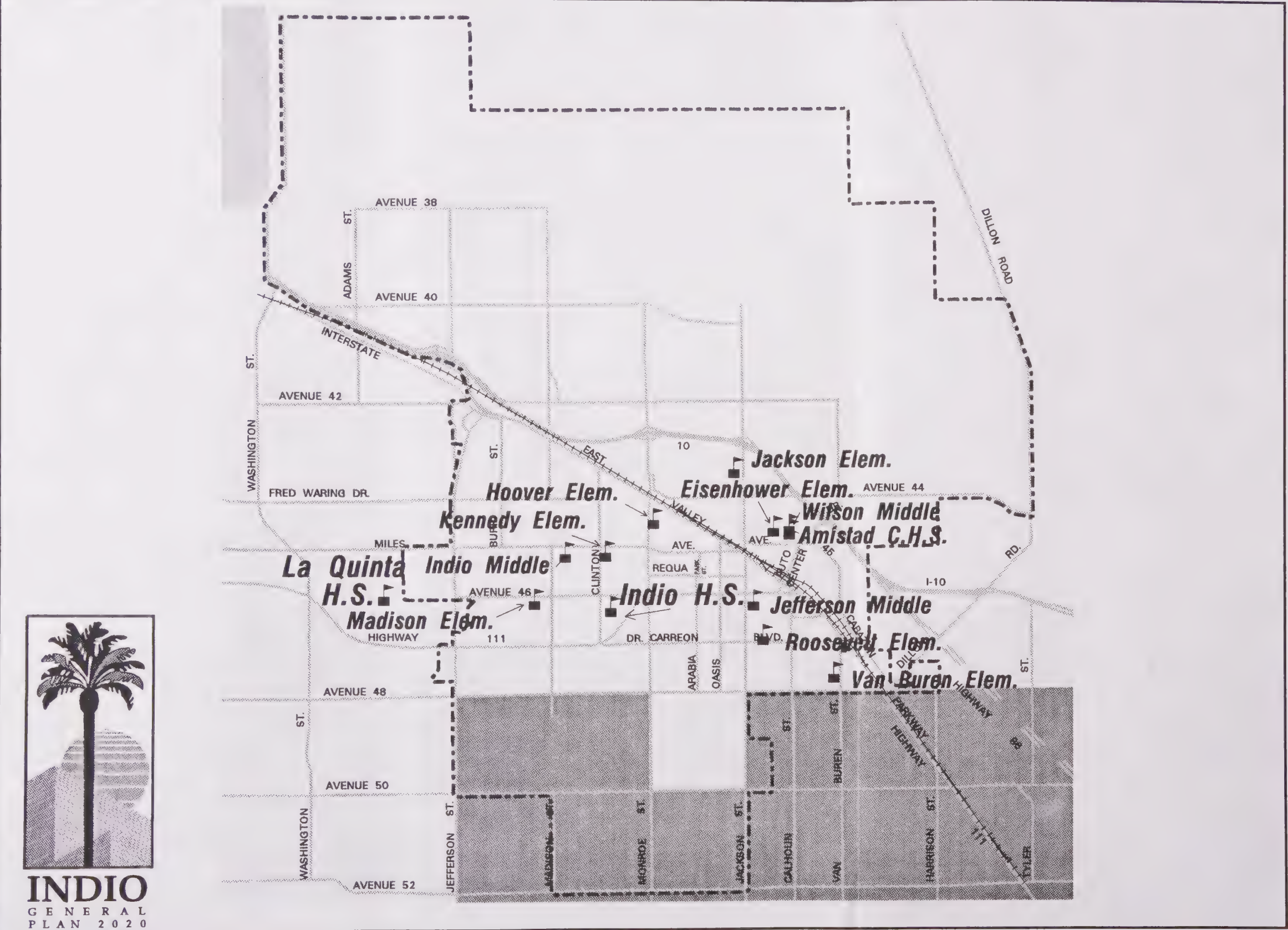
The planning area is served by two school districts: the Desert Sand Unified School District and the Coachella Valley Unified School District.

Public School Planning Parameters

In terms of meeting future demand, the DSUSD has general standards for development of future schools. The ideal capacities for each school level are as follows:

- ▶ **Elementary (K-5)**
650 to 750 students per school
10-acre site
- ▶ **Middle School (6-8)**
1,200 students per school
20-acre site
- ▶ **High School (9-12)**
2,100 students per school
50-acre site


The service area of a school varies and is based on the density of the student population, and can



Explanation

- SCHOOL DISTRICTS
- DSUSD:
Desert Sands Unified
School District
 - CVUSD:
Coachella Valley Unified
School District
 - PSUSD:
Palm Springs Unified
School District

Figure 3.4-1
PUBLIC SCHOOLS AND
SCHOOL DISTRICTS

 Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

Table 3.4-1

SCHOOL ENROLLMENTS AND CAPACITIES

	Enrollment		Total	Average/ Classroom	Capacity
	Regular	Special Attention			
Desert Sands Unified School District (DSUSD)					
Eisenhower	561	14	575	25.5	610
Jackson	613	0	613	21.1	610
Jefferson	559	28	587	*	780
Kennedy	788	0	788	25.4	638
Madison	688	0	688	27.6	759
Roosevelt	644	25	669	29.3	623
Van Buren	661	11	672	24.5	609
Wilson	680	23	703	*	733
Indio Middle	852	20	872	*	960
Amistad High	314	31	345	*	135
Indio High	2,029	49	2,078	*	1,984
Subtotal	8,389	201	8,590		
Coachella Valley Unified School District (CVUSD)					
Westside	*	*	1,925	32.3	710
Coachella Valley High	*	*	2,841		
Subtotal					
Total			11,431		

Source: Weekly enrollment reports from week ending 5/28/93 (DSUSD and CVUSD).

* Information Not Available

often vary over time as actual densities change. The Board of Education has established actual walking distances for different schools. These are 3/4 of a mile for grade K-2 students, 1½ miles for grade 3-5 students, 2 miles for grade 6-8, and 2½ miles for grade 9-12. Figure 3.4-2 shows the application of these walking distances for the schools within the Planning Area. All CVUSD facilities are outside of walking distances for all grade levels.

Funding for Public School Facilities

At the present time, developer impact fees are formulated using the state funding mechanism in AB 2926. These amounts are \$1.65 per square foot for residential development and \$0.26 per square foot for commercial/industrial uses. Because of rising costs and the current impact of school facilities, funding for future schools may be provided through special funding districts (such as Mello-Roos districts) or developer fees.

Higher Education

Continuing education opportunities are provided in the region at the College of the Desert (COD), Chapman College, National University, and California State University San Bernardino satellite campus. The COD is located in nearby Palm Desert and offers a comprehensive program of college level courses and associate degrees in disciplines ranging from business to fine arts. Special programs include the Institute of Culinary Arts, Golf Management, and a School of Nursing. The COD is currently investigating the development of a satellite or second campus facility within the City of Indio.

Chapman College, in Palm Desert, offers a full range of undergraduate and graduate programs. National University, located in Palm Springs, caters to working students who take one course per month. Future plans for National University call for an Indio campus. California State University, San Bernardino offers 12 undergraduate and graduate degrees from a satellite campus. Approximately 750 students currently attend classes at this location.

3.4.2 Health Care Services

A broad range of health care services is available within the Planning Area, including private practice physicians, a full-service medical facility, and two publicly funded health care clinics.

INDIO FACTS: *The John F. Kennedy Memorial Hospital has 130 beds and operates at an average annual capacity of 73 percent.*

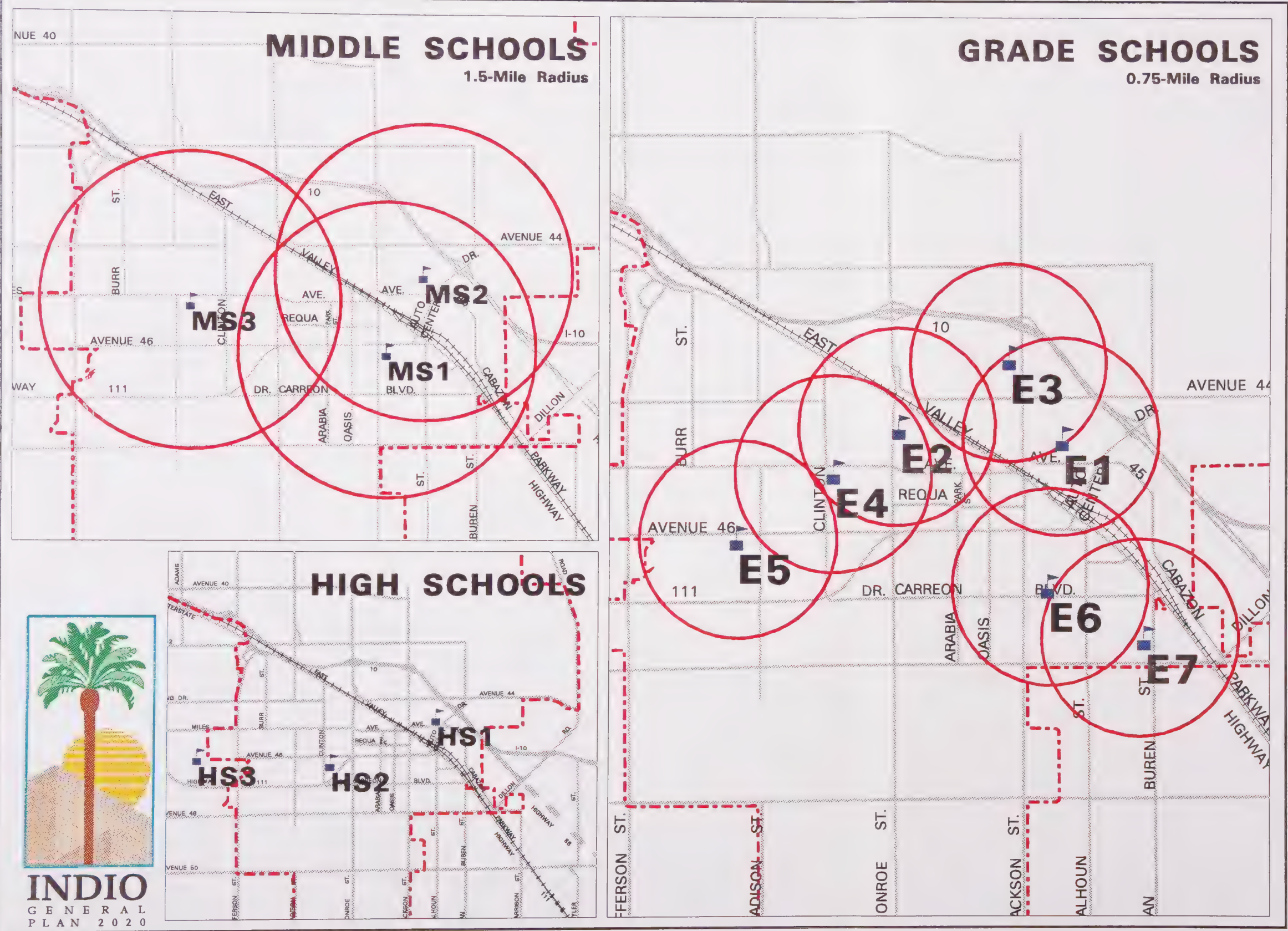
Hospital Service

The John F. Kennedy Memorial Hospital is located at 47111 Monroe Street and provides health services for the City of Indio and surrounding region. This full-service hospital has 130 beds and operates at an average annual capacity of 73 percent (Monroe Street EIR Dec. 1991). This general, acute care hospital offers standard services that include a 24-hour emergency room, in- and out-patient surgery, obstetrics, pediatrics, an intensive care unit, and outpatient radiology. Current plans for JFK Memorial show an addition of 30 private rooms and an out-patient surgery center (Monroe Street EIR).

Public Health Clinics

The Indio Health Center is located on Avenue 48 and Oasis Street. This facility is operated by the Riverside County Department of Health and is open from 9 a.m. to 5 p.m., Monday through Friday, and offers services primarily to lower income families. Oriented toward preventative health care, services offered by the clinic include health education, family planning, and immunizations for children. A new health care clinic facility is currently under construction.

El Progreso Medical Clinic is a federally funded rural health care clinic located at 82-423 Miles



Avenue. This clinic offers a variety of medical services to the community.

INDIO FACTS: *The City of Indio has approximately 220 acres of recreational facilities, including the County Fairgrounds, the Indio Municipal Golf Course, and the County Desert Park.*

3.4.3 Parks and Recreation

Local Facilities

The City of Indio and the Coachella Valley Recreation and Parks District (CVRPD) are responsible for parks and recreation facilities in the City of Indio. The City owns and maintains its own parks, while the CVRPD provides recreational activities in the parks (S. Morgan, personal communication 1993).

The City of Indio has approximately 220 acres of recreational facilities within the City limits that include the County Fairgrounds, the Indio Municipal Golf Course, and the County Desert Park. Eight neighborhood and community parks are within the Planning Area that make up approximately 50.3 acres of the above 220 acres (see Figure 3.4-3). Many of the existing small parks were created with the cooperation of the water department and include a well site or reservoir. A new park is being developed on Avenue 46 along with the development of a 2-million-gallon reservoir.

Recreational activities are provided by the CVRPD. The CVRPD is a Special Recreation District that serves the entire Coachella Valley. In 1992, the CVRPD opened a Community Center that contains over 33,000 square feet of building space and will offer a range of activities for all age groups (see Figure 3.4-3).

Regional Facilities

Other parks in the area include the 710-acre Lake Cahuilla County Park in La Quinta, which includes recreational opportunities such as swimming, camping, fishing, hiking, horseback riding, and boating. Indio Hills Palms State Park offers 1,690 acres of passive scenic open space located north of the Planning Area, with portions of the park adjacent to the northern boundary of the Planning Area. In addition, Indio also contains the El Dorado and the Empire Polo Clubs, which offer a combined 15 polo fields, stables, an equestrian center, and a clubhouse within the Polo Clubs' combined 345 acres.

Other areas in the vicinity that are open to the public for both passive and active recreational opportunities include Salton Sea State Recreation area to the southeast; Joshua Tree National Monument, located to the northeast of the City; the San Jacinto Mountains, located to the southeast of the City; Anza Borrego Desert State Park, which covers 500,000 acres and is located to the southeast of the City; and Mt. San Jacinto State Park, located west of the City.

The 1,200-acre Living Desert Nature Preserve is located to the west in Palm Desert and The Nature Conservancy preserves (Big Morongo Canyon Preserve north of City, Thousand Palms Oasis, contained within the Coachella Valley Nature Preserve and the Dos Palmas Nature Preserve, near the Salton Sea), also provide recreational opportunities.

Existing Park Standards

At the current time, Indio does not have standards for the number of park acres per 1,000 residents desired or development standards for how a park should be equipped. In order to measure Indio's current offerings, two measures can be used: the Quimby park land dedication standard or the standards used by CVRPD in area where it buy and constructs parks.

Under state law, a community can enact a Quimby ordinance that allows the City to request a dedication or in-lieu payment for park land equal to 3 acres per 1,000 population. Using this measure

COMMUNITY DEVELOPMENT

and a 1992 population of 40,378, the City should have 121 acres of parks. Given the 55 acres currently available, this leaves a deficit of 66 acres.

The CVRPD maintains standards for facilities and parks in its service areas. Park standards for the CVRPD are as follows:

Neighborhood park	2 acres/1,000 people
Community park	2 acres/2,000 people
Sports complex	2 acres/3,000 people

According to current CVRPD Standards, Indio should have 81 acres of neighborhood parks, 40 acres of community parks, and 27 acres allotted for a sports complex, for a total of 148 acres. Indio currently has 55 acres of parks, a deficit of 93 acres.

To support parks, the City of Indio uses a park fee. City Ordinance No. 921 provides for development impact fees to be collected at a rate of \$350.00 per dwelling unit, \$0.10 per square foot of gross floor area for commercial development, and \$0.03 per square foot of gross floor area of industrial development. These fees are to be deposited in a special fund for the acquisition of park lands, improvements and facilities to park lands and leisure activity areas and public buildings. Forty-three percent of the fee is allocated for park use, and 57 percent of the fee is allocated to public buildings.

3.4.4 Libraries

The Max T. McCandless Library is a 20,000-square-foot regional facility that provides services to the Coachella Valley. This facility is the largest in the Coachella Valley. It is one of only two reference libraries in Riverside County. It is located in Indio between Towne and Smurr Streets in the City's Civic Center (see Figure 3.4-3). It operates under the jurisdiction of the Riverside County Library System (RCLS) and is funded by the Federal Government, the State of California, and the County of Riverside.

The library contains approximately 101,680 items and is staffed by 11.8 FTE (Full Time Equivalent) employees. The library is currently open 54 hours per week, 6 days a week (RCLS 1993). The Indio Branch also serves as the regional backup for the Coachella Valley Bookmobile. Both these facilities serve an estimated population base of 55,000.

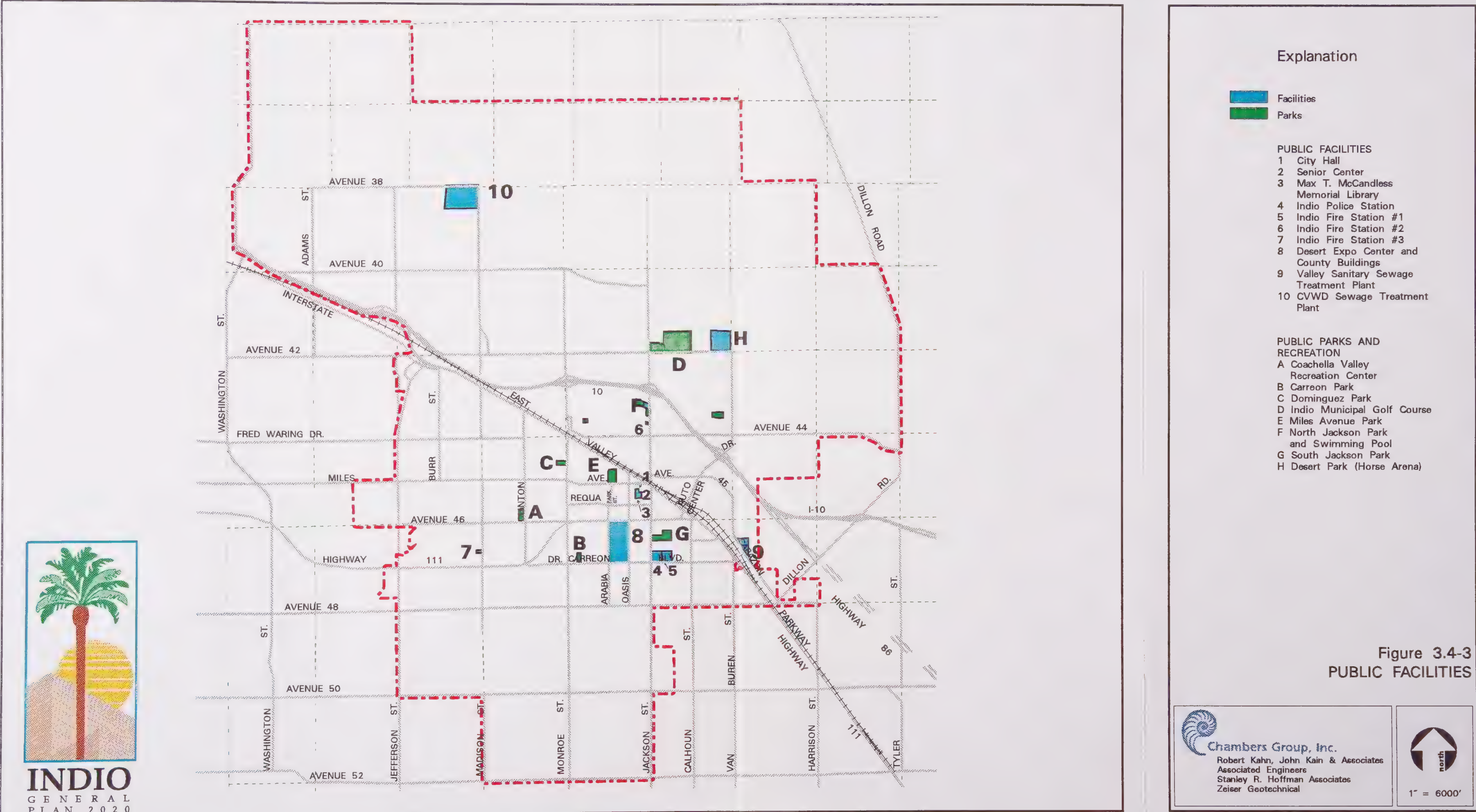
Based on a study conducted in 1987, this library currently provides adequate service for the City of Indio, offering 1.72 volumes per capita and 0.5 square feet per capita. Riverside County standards are 1.2 volumes per capita and .5 square foot per capita.

INDIO FACTS: *The Max T. McCandless Library is the largest library in the Coachella Valley and one of only two reference libraries in Riverside*

The Riverside County Free Library Service Standards (1987) include plans for additional library facilities needed to meet demand for the year 2000. One facility, called Indio North, is a 9,000-square-foot library to be located in Indio. Prospective construction would begin in 1999-2000.

The RCLS has started a legal resource center located at the library and contain law books and referrals in Spanish and English.

Sources of funding for the library system include a percentage of the taxes collected by the general County tax levy and competitive special district funding.



3.5 COMMUNITY DESIGN

At the present time, the City of Indio does not have a full community design program. The system that is in place is composed of four factors: design review, design expectations, program-oriented design guidelines, and the Shadow Hills Interim Policy Plan (SHIPP). These four factors are described in the following paragraphs.

3.5.1 Design Review

The City's Development Code includes language that establishes an architectural and site plan review procedure, including the formation of a Design Review Board (DRB). The City has not formed a separate DRB at this time. All design review at this time is handled by the Planning Commission during its review of a project.

Problems expressed relating to the current system include the following:

- ▶ The lack of a comprehensive design guidelines for the City provides no guidance to the developer, staff, Planning Commission, or the public. This leads to a high level of subjectivity and potential inconsistencies in application.
- ▶ The lack of standards results in all design issues being scheduled for the Planning Commission's review, often causing unnecessary costs and delays for minor projects.
- ▶ Because the entire design process is very subjective, the risk in preparing plans in the City is very high.
- ▶ The lack of standards can sometimes lead to designs that are "underdesigned."

3.5.2 Design Expectations

Over time, the staff, Planning Commission, and City Council have developed a set of design expectations. While these have not been compiled into a written form, these expectations have become standards in application. Some of the most commonly stated expectations include the following:

- ▶ **Roof Tile.** All roofing materials shall be tile and shall be of an earth tone color. Any deviation from this must be approved by the City Council.
- ▶ **Metal Buildings.** No metal buildings are allowed outside of an industrial area.
- ▶ **Block Walls.** All fencing that is visible from a public street shall be block wall construction.
- ▶ **Street Trees.** One street tree is required for each residential lot.
- ▶ **Parking Lot Landscaping.** A standard of one planter for every six cars is currently used.

3.5.3 Program Oriented

In order to provide further incentives to foster development in the City's Enterprise Zone, the City has adopted a set of "Industrial Design Guidelines" for use in its fast track processing program. The six-page handout provides some general design parameters that are to be used by the developer in preparing a plan and are also used by staff for approving the plan. Under the fast track program, plot plans for permitted uses can be approved at the counter, thereby avoiding the normal review required by the Planning Commission, except for use permits.

Many of the guidelines contained in this manual are the result of design expectations discussed above, while others are standards adopted by staff to ensure the Planning Commission and City Council that proposals approved by staff would meet their expectations. The Industrial Design Guidelines provide broad guidance on the following topics:

- ▶ review by associations;
- ▶ block walls;
- ▶ building type;
- ▶ colors;
- ▶ community standards;
- ▶ driveway separation;
- ▶ compact parking spaces;

COMMUNITY DEVELOPMENT

- ▶ landscape setbacks, water conservation, landscape maintenance, planters, tree size, and type;
- ▶ lighting;
- ▶ equipment screening;
- ▶ parking;
- ▶ roofing materials, access, drainage, and roof-mounted equipment;
- ▶ signs
- ▶ trash enclosures; and
- ▶ outside storage.

3.5.4 Shadow Hills Interim Policy Plan

The SHIPP was prepared in early 1992 to provide the City decision-makers with some interim guidance on the review of projects north of I-10. A section of this document provides broad design guidelines that can be used by the City in guiding the development of projects in this area.

3.6 ECONOMIC SETTING

3.6.1 Purpose and Objectives

Indio is currently in the process of a major General Plan update to guide the growth of the City over the next 20 years. In order to enhance the success of these efforts, the preparation of an economic study and the development of a comprehensive economic development strategy were viewed as essential.

This study presents the results of an economic analysis of the Coachella Valley, the East Coachella Valley, and the City of Indio to better understand the economic and demographic forces that are shaping the region. This section will also discuss how Indio can plan an economic strategy to meet its employment growth goals while providing a diversity of development, employment, housing, and resort/recreational opportunities. Figure 3.6-1 shows the general boundary of the East Coachella Valley, as well as the location of Indio within the East Coachella Valley.

The specific objectives of the economic analysis include the following:

- ▶ provide a current economic profile for Indio;
- ▶ evaluate the economic position of Indio in a regional context;
- ▶ focus on the key growth sectors of the local economy;
- ▶ establish a reliable projection of future market demand and development opportunities as a basis for General Plan preparation;
- ▶ assist the City in determination of land use, development policy, and economic programs to lead to balanced growth and development for Indio; and
- ▶ provide stability of local government by providing a positive revenues to expenditures ratio.

INDIO FACTS:

While the Coachella Valley has more than doubled in permanent population over the 1980s, the economy has remained concentrated in the retailing, services, agriculture, and lodging/resort sectors.

3.6.2 Overview of Economic Analysis

In preparing the employment projections, the entire Coachella Valley has been treated as the major economic region, with the East Coachella Valley, and Indio -- located within the East Valley -- competing for a share of the regional growth. Furthermore, the projections have been prepared as a range, with the latest adopted Southern California Association of Governments (SCAG) projections serving as the baseline trend, and an enhanced projection serving as a more dynamic scenario for Indio under the assumptions of a diversifying manufacturing and service economy, strengthening of the civic center area, the Highway 111 corridor, strong residential and commercial growth in the Shadow Hills area, and the emergence of a resort hotel sector within Indio.

While the Coachella Valley has more than doubled in permanent population over the 1980s, from about 88,516 in 1980 to over 222,000 in 1990, the economy has remained concentrated in the retailing, services, agriculture, and lodging/resort sectors. Furthermore, much of this growth has occurred outside of the East Coachella Valley area, which has captured only about 8.5 percent of the job growth from 1983 to 1992. Historically, manufacturing activities have not constituted major growth sectors,

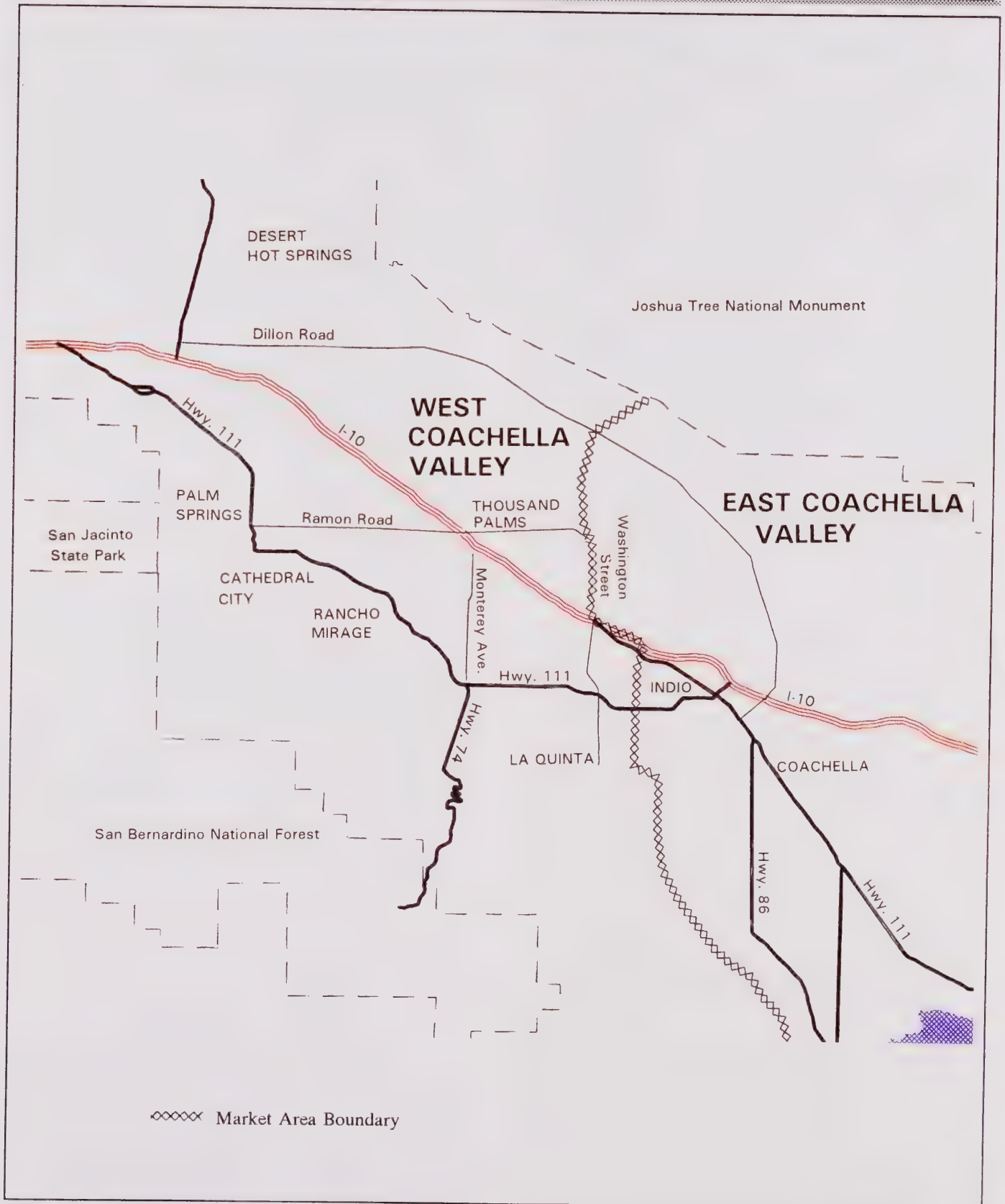


Figure 3.6-1
DEFINITION OF MARKET AREAS

with only about 3 percent of the Coachella Valley's employment growth occurring in manufacturing over the 1983 to 1992 period.

Indio has traditionally been the economic center of the East Coachella Valley. However, it has largely served the low and moderate income housing market needs and has not fully participated in the substantial lodging/resort growth occurring in the neighboring communities to the west. While Indio has maintained a positive image as a balanced community with an economic base serving a broad range of market demands, Indio can only enhance its full economic development potential through an understanding of the current market opportunities and the development of a strategy to realize those opportunities.

Indio has a number of opportunities, as follows:

- ▶ the potential to broaden the mix of housing and regional commercial development offered by the Shadow Hills area;
- ▶ the ability to strengthen and diversify its manufacturing and commercial base provided by the newly created Coachella Valley Enterprise Zone Authority (CVEZA);
- ▶ the opportunity to provide resort lodging facilities near the polo fields, the Shadow Hills area, and in other areas of the City, and to benefit from large spectator events; and
- ▶ the opportunity to strengthen its civic, cultural, and government center.

By responding to all these opportunities, Indio can capture a larger share of the economic growth projected to occur in the 1990s and on into the 21st century. The enhanced economic projections presented in this report assume that such a strategy can be realized by Indio, while the baseline trend projection continues current patterns.

3.6.3 Economic Analysis Areas and Economic Issues

The economic analysis highlights growth trends that will affect Indio's economic future. However, to fully participate in capturing an increasing share of growth and to strengthen and diversify the local economy,

Indio needs to develop a comprehensive economic strategy as part of the General Plan process that focuses on unique subareas of the City.

Figure 3.6-2 shows the six subareas that were evaluated in the economic analysis. The proposed components of that strategy and related key issues are discussed below.

Shadow Hills

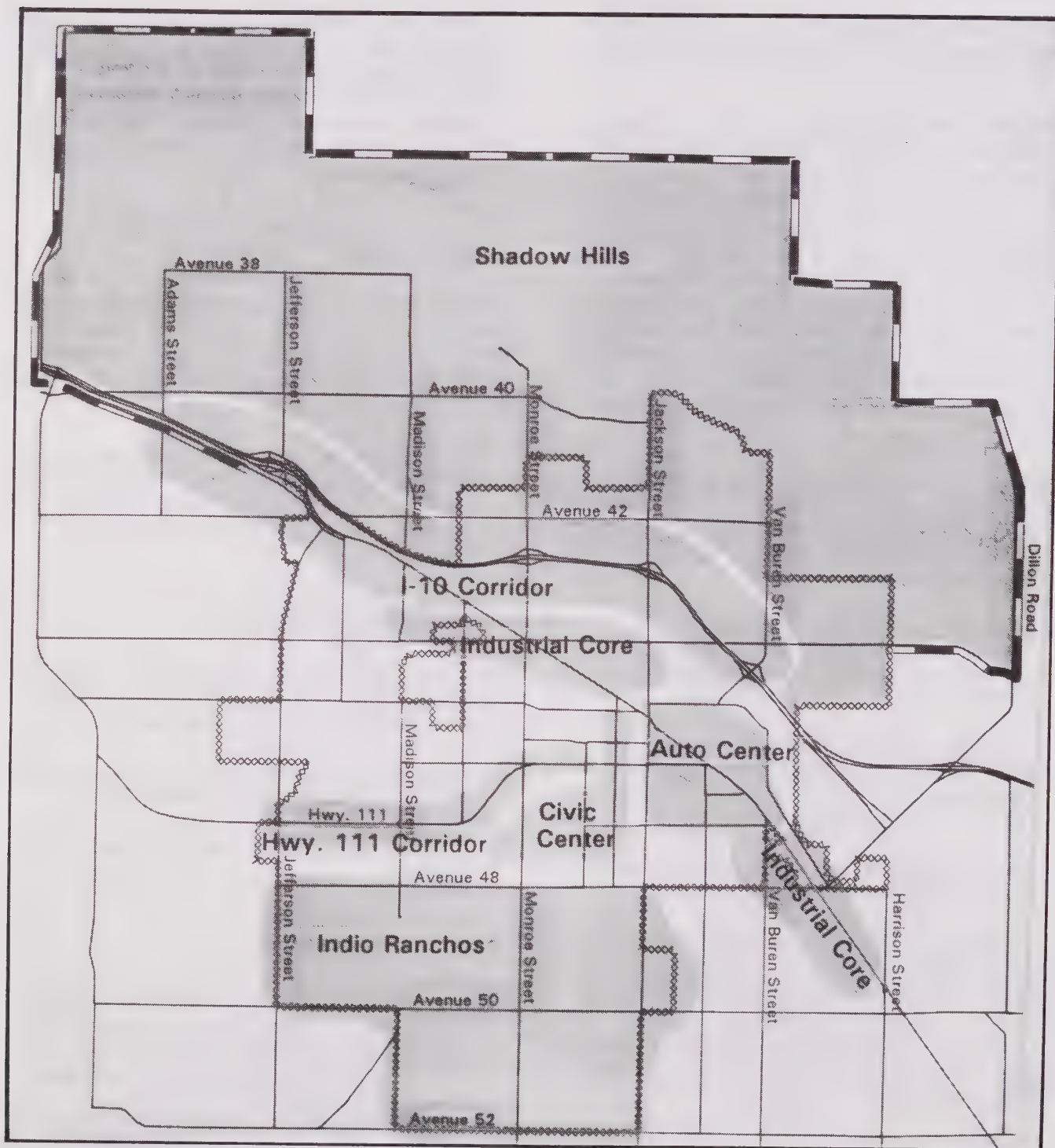
Major development is proposed or anticipated in the area just north of the City above I-10, generally referred to as the Shadow Hills area. Currently, this area is primarily used for agricultural activities. Key issues related to this area are

- ▶ development of residential units providing a mix of housing opportunities and prices meeting the needs of a changing labor force, and also offering more seasonal and retirement home choices;
- ▶ development of support community and neighborhood retail centers;
- ▶ providing recreational opportunities, such as golf courses, tennis courts, and recreational centers, that enhance the area's attractiveness;
- ▶ development of destination resort potential with lodging and recreational amenities; and
- ▶ potential locations for permanent California State University.

Interstate 10 Corridor

The I-10 corridor, a portion of which runs through Indio, is attracting major attention by a number of communities in the Coachella Valley because of its attractiveness for retailing and business activities. Indio has a good opportunity to enhance its competitive position along this corridor and has already approved the Pacific Indio proposal at the Monroe Street offramp for regional retailing and mixed use development. Key issues related to this area include

- ▶ development of major regional retail and mixed use center at the Monroe Street offramp;



**Figure 3.6-2
ECONOMIC ANALYSIS SUBAREAS**

- ▶ encourage the development of other intersections along the I-10 through appropriate land use designations and improvements to accessibility and circulation;
- ▶ improvements to the signage near and along Auto Center Drive and the I-10 in order to improve the market draw to the auto uses along East Valley Parkway and the eastern end of Highway 111;
- ▶ development of office/business park uses, and related business-oriented lodging facilities, also serving the through traveler; and
- ▶ in the long term, higher density condominiums, townhomes, and apartments may be appropriate.
- ▶ strengthen the governmental nature of the civic center area, allowing for these facilities to expand;
- ▶ encourage the COD to locate its temporary facility downtown and work with the college to find a permanent site in Indio;
- ▶ revitalize the downtown commercial core in parallel with the growing needs of the current and future residences, college students, and governmental employees; and
- ▶ use CVEZA to assist businesses in the commercial core, and encourage the college to develop programs that strengthen the skills of the local labor force.

East Valley Parkway Industrial Core

East Valley Parkway, which runs from the I-10 at Jefferson Street and parallels the Southern Pacific railroad tracks, has had industrial, railroad-oriented, motel, and long distance transportation activities concentrated along this corridor. Also, in the near future, the State Route 86 designation will be abandoned when a bypass is constructed to the I-10 through Coachella. Key issues related to this corridor are

- ▶ revitalization of the existing industrial and railroad-oriented activities, and encouragement of new industrial/manufacturing uses;
- ▶ use of the CVEZA to attract industries that will benefit from Indio's labor pool; and
- ▶ infrastructure improvements to improve the traffic flow and attractiveness of the area.

Civic Center

Like many older city centers, Indio has retained governmental uses, with the concentration of both city, county, and state government facilities in the downtown area. Newer business developments have taken place outside the city center along more accessible routes. Interest has been expressed by the COD to locate a satellite facility in Indio, and the downtown area is one site under consideration. Key issues related to this area are

Highway 111 Corridor

The Highway 111 corridor has historically had the major concentration of commercial businesses, including the Indio Fashion Mall, auto dealers, and other community and region serving establishments. With significant interest shifting to the I-10 corridor, uses in this corridor need to be strengthened and focused to primarily serve the community. Key issues related to this corridor are

- ▶ timely completion of the Indio Fashion Mall within the available window of opportunity;
- ▶ encourage commercial, business service, and office uses near the Riverside County Courthouse facilities to serve employees and visitors;
- ▶ provide design, economic, and other incentives for auto service to remain on the eastern segment of the Highway 111 corridor;
- ▶ strengthen the existing businesses along the corridor, particularly the auto service and major retailers, through the use of revitalization and CVEZA incentives;
- ▶ work closely with existing businesses to identify their current needs in order to retain them within the City of Indio; and
- ▶ facilitate infrastructure improvements along Highway 111 including accessibility, facade, streetscapes, and signage

COMMUNITY DEVELOPMENT

Indio Ranchos

Recently, the City of Indio annexed an area known as Indio Ranchos, which contains a large number of polo fields and equestrian activities, and interest has been expressed by some of the landowners in developing resort lodging facilities. Indio has historically not participated in the resort lodging market within the Coachella Valley, and this may present a unique opportunity that may encourage related support land uses. Key issues related to this area are

- ▶ encourage and assist the development of resort lodging and related support facilities and activities in the polo fields area;
- ▶ continue master planned residential development in this area;
- ▶ as Indio starts to create an identity as a destination resort area, build on this momentum in other parts of the City such as Shadow Hills or the western portion of Indio; and
- ▶ broaden the recreational opportunities offered in this area to achieve year-round activities, and encourage a wide-range of equestrian and nonequestrian-oriented events.

In summary, this discussion has focused on highlighting key economic issues facing Indio. As the General Plan develops, there will need to be further discussion, refinement, and modification of these issues as they are structured into a comprehensive economic development strategy that enables Indio to strengthen and diversify its economy.

3.6.4 Overview of Employment Trends and Projections

Table 3.6-1 provides a summary of historic and projected employment by industry category for the Coachella Valley, the East Coachella Valley, and the City of Indio. Two scenarios are shown. The SCAG-based scenario can be considered a low projection and does not consider the potential impact of the CVEZA. The enhanced projection can be considered a high projection and takes into account the effect of the enterprise zone on Indio's economy.

Together, these two projections provide high and low parameters for economic development planning.

Employment Growth

As shown, employment in the Coachella Valley is projected to increase from about 88,930 workers in 1992 to about 171,300 workers in 2020 under both scenarios. In the East Coachella Valley, employment is projected to increase from 18,289 estimated workers in 1992 to about 53,300 workers in 2020 under the SCAG-based scenario. Under the enhanced scenario, employment is projected to increase slightly more, to about 55,800 workers in the East Coachella Valley.

Indio's employment is projected to increase from 12,370 workers in 1992 to about 20,200 workers under the SCAG-based scenario, for a net increase of about 7,830 workers. Under the enhanced scenario, Indio's employment is projected to increase by about 19,830 workers -- more than double the SCAG-based increase. The enhanced projection shows significantly higher employment growth than does the SCAG-based projection.

Composition of Employment Growth

In the Coachella Valley as a whole, local-serving employment is projected to increase by about 37,800 new workers, about 45 percent of all new jobs projected. In the East Coachella Valley, economic growth is projected to be more balanced, with about 38 percent in local-serving industry, about 19 percent in basic nonmanufacturing industry, 21 percent in basic manufacturing, and about 22 percent either self-employed or in government.

Under the enhanced projection, Indio's employment growth consists of about 42 percent local-serving, 16 percent basic nonmanufacturing, 18 percent basic manufacturing, and 23 percent self-employed and government. Because of the enterprise zone, projections for manufacturing and other basic industries have been enhanced in the East

Table 3.6-1

EMPLOYMENT PROJECTIONS

	Historical		SCAG-Based Projections *			Enhanced Projection		
	1983	1992	2000	2010	2020	2000	2010	2020
Coachella Valley								
Basic Manufacturing	1,479	2,319	4,800	10,700	14,000	4,800	10,700	14,000
Basic Nonmanufacturing	11,153	14,745	18,300	24,900	27,800	18,300	24,900	27,800
Local Serving	31,120	50,512	62,900	80,400	88,300	62,900	80,400	88,300
Gov't and Self-Employed	<u>13,826</u>	<u>21,354</u>	<u>27,200</u>	<u>36,700</u>	<u>41,100</u>	<u>27,200</u>	<u>36,700</u>	<u>41,100</u>
Total	57,578	88,930	113,100	152,800	171,300	113,100	152,800	171,300
East Coachella Valley								
Basic Manufacturing	620	1,198	2,500	5,700	8,800	2,700	6,300	8,200
Basic Nonmanufacturing	3,838	2,615	3,800	6,500	8,900	4,200	7,100	8,400
Local Serving	7,414	10,085	13,800	19,500	23,400	15,300	21,500	25,800
Gov't and Self-Employed	<u>3,752</u>	<u>4,392</u>	<u>6,300</u>	<u>10,000</u>	<u>12,200</u>	<u>7,000</u>	<u>11,000</u>	<u>13,400</u>
Total	15,624	18,289	26,400	41,700	53,300	29,200	45,900	55,800
City of Indio								
Basic Manufacturing	312	529	1,000	2,200	3,100	1,400	3,200	4,100
Basic Nonmanufacturing	1,551	1,037	1,400	2,400	3,100	1,900	3,500	4,200
Local Serving	5,934	7,920	8,500	9,400	9,300	11,100	14,200	16,300
Gov't and Self-Employed	<u>2,370</u>	<u>2,884</u>	<u>3,300</u>	<u>4,200</u>	<u>4,700</u>	<u>4,400</u>	<u>6,400</u>	<u>7,500</u>
Total	10,167	12,370	14,300	18,200	20,200	18,800	27,300	32,200
Total may not add due to rounding.								
* Based on SCAG 1987 projection of 2010 population, employment, and housing.								

Coachella Valley and Indio. In addition, the enhanced scenario assumes a continued diversification of Indio's economic base and improved competitiveness. This scenario does not assume status quo; rather, it projects what is possible under a coordinated economic development strategy.

3.6.5 Existing and Projected Employment Structure of Indio

Table 3.6-2 provides more detail about existing and projected employment by industry in Indio. In 1983, the local-serving industry sector comprised about 58 percent of total employment in the City. By 1992, this share is estimated to have increased to about 64 percent of total employment. The local-serving sector is driven primarily by retail, as well as construction and other local services. Basic manufacturing, which contains no high-technology manufacturing, has increased its share from about 3.1 percent in 1983 to about 4.3 percent in 1992. Basic nonmanufacturing has decreased from about 15.3 percent in 1983 to 8.4 percent in 1992. This is due primarily to the shrinking agricultural sector in the East Coachella Valley.

By 2020, the basic manufacturing sector in Indio is projected to increase its share to about 12.8 percent. The basic nonmanufacturing sector is also projected to increase its share from 8.4 percent in 1992 to 13.1 percent in 2020. As these two sectors expand their shares, the local-serving sector is projected to decline from its 1992 share of 64 percent to about 50.7 percent in 2020.

The increase in Indio's employment and the shifts in Indio's economic composition are based on two main assumptions. First, the East Coachella Valley is perceived as being well positioned to capture a significant share of the valley's growth in nontourism industries. By 2020, about one-third of all jobs in the valley are projected to be in the East Valley. The second assumption is that Indio will capture over half of the employment in the East Valley based on its central location, the new development in Shadow Hills, the eventual development of the polo grounds, the incentives offered under the CVEZA, and the redevelopment agency.

3.6.6 Retail Demand Projections

Indio has become the commerce center of the East Coachella Valley. Retail trade is currently the largest industry in Indio in terms of workers, and sales tax is one of the City's largest revenue sources. The diversity of retail outlets and the year-round market have given Indio one of the higher sales per capita figures in the valley.

However, several trends are jeopardizing Indio's ability to compete for retail dollars within the valley. First, the continued annexation and development along I-10 are generating new forms of competition. Discount warehouse retailers and other promotional retail outlets locating in nearby resort communities are beginning to compete with Indio for local purchasing power. Second, Indio has lost several major retailers recently and is currently trying to revive the Indio Fashion Mall. The declining attractiveness of Indio's retail sector has led to increased leakage to surrounding communities with newer centers. Given the increasing competition and Indio's decreasing ability to compete, a comprehensive retail strategy is needed to increase the attractiveness of Indio as a retail center.

Part of that strategy can be realized by planning for new retail development that can increase Indio's competitiveness. A retail demand analysis was conducted to determine the potential for new retail development in Indio based on permanent households, seasonal households, visitors, and Indio's emerging resort sector. A major portion of the projected regional retail demand can be satisfied along the I-10 corridor, adjacent to the Shadow Hills area. Table 3.6-3 shows the projected demand for regional, community, and neighborhood shopping centers.

Table 3.6-2

CITY OF INDIO: EMPLOYMENT TREND AND PROJECTION

Industry	Employment			Share of Total Employment		
	1983	1992	2020	1983	1992	2020
Basic Manufacturing						
High Technology Manufacturing	0	0	15	0.0%	0.0	0.0%
Diversified Manufacturing	<u>312</u>	<u>528</u>	<u>4,119</u>	<u>3.1%</u>	<u>4.3%</u>	<u>12.8%</u>
Subtotal	312	528	4,134	3.1%	4.3%	12.8%
Basic Nonmanufacturing						
Agriculture and Mining	718	283	133	7.1%	2.3%	0.4%
Long Distance Transportation	91	40	358	0.9%	0.3%	1.1%
Wholesale Trade: Durable	124	20	460	1.2%	1.6%	1.4%
Hotels and Motels	311	168	1,496	3.1%	1.4%	4.6%
Computer Services	6	6	185	0.1%	0.0%	0.6%
Diversified Basic Services	<u>301</u>	<u>338</u>	<u>1,594</u>	<u>3.0%</u>	<u>2.7%</u>	<u>4.9%</u>
Subtotal	1,551	1,037	4,226	15.3%	8.4%	13.1%
Local Serving						
Construction	537	1,608	2,757	5.3%	13.0%	8.6%
Local Transportation/Communication/Utilities	431	485	1,183	4.2%	3.9%	3.7%
Wholesale Trade: Non-Durable	173	400	1,340	1.7%	3.2%	4.2%
Retail Trade	3,238	3,770	7,530	31.8%	30.5%	23.4%
Finance/Insurance/Real Estate	284	307	1,343	2.8%	2.5%	4.2%
Local Services	<u>1,271</u>	<u>1,350</u>	<u>2,197</u>	<u>12.5%</u>	<u>10.9%</u>	<u>6.8%</u>
Subtotal	5,934	7,920	16,350	58.4%	64.0%	50.7%
Self-Employed	624	759	1,977	6.1%	6.1%	6.1%
Government	1,747	2,125	5,535	17.2%	17.2%	17.2%
Total	10,167	12,370	32,222	100.0%	100.0%	100.0%
Source:	County Business Patterns					

Table 3.6-3

PROJECTED DEMAND FOR RETAIL SPACE AT BUILDOUT

	Regional Centers	Community Centers	Neighborhood Centers	Total Retail Space
Supportable GLA ¹ at Build Out	918,000	1,682,000	1,830,000	4,430,000
Less: Existing GLA ¹	218,000	941,000	932,000	2,091,000
Net Increase	700,000	741,000	898,000	2,339,000
Allocation by Center Type	30%	32%	38%	100%

¹ GLA - Gross Leasable Area

Source: California State Board of Equalization

INDIO FACTS: *Indio is projected to add approximately 1,240 hotel rooms by 2020.*

3.6.7 Hotel Demand Projections

To date, Indio has not participated fully in the business or resort lodging market. However, growth has been occurring slowly in the supply of motel rooms in Indio. Table 3.6-4 presents hotel/motel data for 1983 and 1991 and projections for 2000, 2010, and 2020. As shown, Indio had 961 rooms in 1983. By 1991, this number increased to 1,246. This amounts to 285 net new hotel rooms over the 8-year period, or about 36 rooms per year. In 1983, Indio had about 9.3 percent of the Coachella Valley's supply of hotel rooms. This share dropped to 7.8 percent by 1992.

Projections shown for 2000, 2010, and 2020 are based on the assumption that Indio begins to compete in the business and resort lodging market, with potential hotel development on the polo grounds, west Indio, Shadow Hills, and the Pacific Indio project. Assuming an increasing capture of the Coachella Valley lodging market, Indio is projected to add about 1,240 hotel rooms by 2020.

3.6.8 Housing and Population Trends and Projections

Table 3.6-5 contains summary information on the projection of housing units for the Coachella Valley, East Coachella Valley, and Indio, as well as population. Projections are shown for the enhanced scenario, assuming increased employment as discussed in Section 3.6.4, and are based on CVAG's projection of households from the Regional Housing Needs Analysis released in April 1991.

Housing Units

Housing units are projected using a combination of SCAG and CVAG data, as well as employment projections and jobs/housing relationships. The City of Indio has projected to increase to 38,357 housing units by buildout. This is estimated to represent about 69 percent of the dwelling units in the East Valley and about 18 percent of the dwelling units in the Coachella Valley by 2020. The Coachella Valley is projected to continue to increase in permanent residency, from 66 percent in 1983 to 70 percent by 2020. Indio is projected to decrease in permanent occupancy with the addition of new amenity-related developments such as Shadow Hills.

Population

Population for Indio is projected using a population per dwelling unit factor based on 1991 household population reported by the State Department of Finance and 1991 housing units used for permanent residence, as shown below.

Table 3.6-6

POPULATION PER DWELLING UNIT FACTOR

1991 Total Population	38,124
Less: Population in Group Quarters	- 822
Equals: Population	= 37,302
Divided by: Housing Units used for Permanent Residence	+ 11,751
Equals: Population per Housing Unit for Permanent Residence	= 3.17

Based on the projected housing units for permanent residency, Indio is projected to have a 2020 population of approximately 97,300, with about 11,500 seasonal residents.

Table 3.6-4
PROJECTION OF HOTEL ROOMS

Hotel Rooms	Coachella Valley	City of Indio	Indio's Capture of Coachella Valley Total
1983	10,294	961	9.3%
1991	15,952	1,246	7.8%
Rooms Added: 1983 - 1991	5,658	285	5.0%
2000	21,102	1,761	8.3%
2010	24,642	2,150	8.7%
2020	27,472	2,490	9.1%
Rooms Added: 1991 - 2020	11,520	1,244	10.8%

Source: Palm Springs Convention and Visitor's Bureau
Wheeler's Desert Letter

Table 3.6-5
PROJECTED HOUSING UNITS AND OCCUPANCY TRENDS

	1983	1992	2000	2010	2020
Total Housing Units					
Coachella Valley	99,248	135,598	167,240	208,953	215,100
East Coachella Valley	19,269	27,052	33,405	43,506	55,800
City of Indio	10,143	14,430	19,080	27,053	38,357
Permanent Occupancy Rate					
Coachella Valley	66.1%	68.5%	70.6%	70.0%	70.0%
East Coachella Valley	85.7%	84.0%	81.9%	79.5%	79.5%
City of Indio	81.7%	84.1%	82.3%	80.0%	80.0%
Permanent Population					
Coachella Valley	163,703	240,900	338,300	471,100	484,900
East Coachella Valley	53,949	78,900	91,900	116,200	149,000
City of Indio	25,476	40,500	49,800	68,600	97,300
Seasonal Population					
Coachella Valley	55,038	64,100	73,700	94,000	96,800
East Coachella Valley	6,870	6,500	9,100	13,400	17,100
City of Indio	2,521	3,400	5,100	8,100	11,500

Source: Southern California Association of Governments
Coachella Valley Association of Governments

3.6.9 Jobs/Housing Balance

Table 3.6-7 contains summary information about the projected jobs/housing balance relationships.

Coachella Valley

The Coachella Valley has increased its jobs/housing balance from 0.58 to 0.66 over the period from 1983 to 1992. Based on SCAG projections, the valley is estimated to continue increasing its jobs/housing balance -- to 0.73 in 2010 and 0.80 in 2020 -- under existing trends. Excluding seasonal residency, the Coachella Valley is projected to have a jobs/housing balance of 1.14.

East Coachella Valley

The East Coachella Valley has decreased its jobs/housing balance from 0.81 to 0.68 since 1983 due to more rapid increases in the number of dwelling units. Based on the projected increases in employment, the East Valley's jobs/housing balance is projected to stabilize at 1.00 as its economy diversifies. Excluding seasonal residency, the East Valley is projected to have a jobs/housing balance of about 1.25 by buildout, reflecting the area's transition to a more diversified employment center.

City of Indio

Under the existing SCAG trend, Indio is projected to have a jobs/housing balance of 0.72 by 2010 and 0.63 by 2020. Based on the City of Indio's projection of 38,357 dwelling units by buildout, and the employment projection presented in Section 3.6.4, Indio will have a projected jobs/housing ratio of 0.84 by buildout under enhanced conditions. However, excluding seasonal residency, Indio's jobs/housing balance is projected to be somewhat higher, at about 1.05. Although Indio is projected to add a significant number of jobs over the next three decades, the potential for a significant amount of residential development keeps the jobs/housing balance relatively stable.

3.6.10 Residential Trends in Coachella Valley

Table 3.6-8 presents a summary of current market conditions for residential development in the Coachella Valley. As shown, no attached housing developments are currently selling in the Indio/Coachella market area. In terms of pricing, the single-family product in the Indio/Coachella market area is the most affordable in the Coachella Valley, at a weighted average price of \$104,504. This is about 47 percent of the weighted average sales price for the whole Coachella Valley. The lower price reflects both lower land values in Indio and Coachella as well as the East Valley market's focus on permanent residency. Although there are no actively selling attached developments, the projected diversification of the East Valley economy can be expected to create demand for attached product, both for seasonal and permanent residents.

3.6.11 Projected Demand for Nonresidential Acreage

Table 3.6-9 presents a summary of nonresidential acreage demand for the City of Indio, based on the employment projections in Section 3.6.4, retail projections in Section 3.6.7, and hotel projections in Section 3.6.6. The acreage demand is presented for the enhanced scenario only.

The greatest demand is projected to occur during the period from 2000 to 2010, with demand for about 244 acres of land. The bulk of this demand, about 50 percent, is projected for industrial and business park uses. During the period from 1992 to 2000, demand is projected for about 186 acres, split 40 percent for industrial/business park, 13 percent for office, 42 percent for retail, and 5 percent for hotel. During the period from 2010 to 2020, demand is projected for about 141 acres, split 48 percent for industrial/business park, 14 percent for office, 33 percent for retail, and 4 percent for hotel. Total demand for nonresidential acreage is projected at 571 acres, split 46 percent industrial/business park, 14 percent office, 34 percent retail, and 6 percent hotel.

The projections are shown based on projected 2020 demand. However, the City may want to reserve more land, assuming other related infrastructure

Table 3.6-7
HOUSING MARKET PROFILE
(Actively Selling Projects, Fourth Quarter 1991)

Attached Product	Number of Developments	Weighted Average Price	Weighted Average Sq. Ft.	Total Units Offered	Total Units Sold to Date	Percent of Units Sold
Palm Springs/Cathedral City	1	\$81,950	1,015	128	123	96
Rancho Mirage	2	\$249,990	1,806	408	347	85
Palm Desert	6	\$223,462	1,971	1,795	1,337	74
Indian Wells/La Quinta	7	\$360,840	2,348	2,352	1,768	75
Indio/Coachella	0	n/a	n/a	n/a	n/a	n/a
Total	16	\$239,496	2,006	4,683	3,575	76
Detached Product						
Palm Springs/Cathedral City	18	\$129,187	1,638	2,632	1,399	53
Rancho Mirage	5	\$375,000	3,096	189	69	37
Palm Desert	14	\$332,659	2,681	1,061	544	51
Indian Wells/La Quinta	18	\$234,453	2,306	2,937	888	30
Indio/Coachella	16	\$104,504	1,372	2,051	654	32
Total	71	\$223,596	2,128	8,870	3,554	40
Source: Residential Trends, Competitive Audit, East Riverside County Market Area, December 1991						

Table 3.6-8

**CITY OF INDIO GENERAL PLAN PROGRAM
HOUSING MARKET PROFILE
Actively Selling Projects, Fourth Quarter 1991**

	Number of Developments	Weighted Average Price	Weighted Average Sq. Ft.	Total Units Offered	Total Units Sold to Date	Percent of Units Sold
Attached Product						
Palm Springs	1	81,950	1,015	128	123	96
Rancho Mirage	2	249,990	1,806	408	347	85
Palm Desert	6	223,462	1,971	1,795	1,337	74
Indian Wells/La Quinta	7	360,840	2,348	2,352	1,768	75
Indio/Coachella	0	NA	NA	NA	NA	NA
Total	16	239,496	2,006	4,683	3,575	76
Detached Product						
Palm Springs/Cathedral City	18	129,187	1,638	2,632	1,399	53
Rancho Mirage	5	375,000	3,096	189	69	37
Palm Desert	14	332,659	2,681	1,061	544	51
Indian Wells/La Quinta	18	234,453	2,306	2,937	888	30
Indio/Coachella	16	104,504	1,372	2,051	654	32
Total	71	223,596	2,128	8,870	3,554	40
Source: Residential Trends, Competitive Audit, East Riverside County Market Area; December 1991						

Table 3.6-9

PROJECTED NONRESIDENTIAL ACREAGE DEMAND

Land Use Category	1992 to 2000	2000 to 2010	2010 to 2020	Total Demand
Industrial/Business Park	74	120	69	263
Office	24	34	20	78
Retail/Commercial	78	73	46	197
Hotel	10	17	6	33
Total Acres	186	244	141	571

improvements, and retain flexibility and provide for larger firms that may seek sites with long-range expansion potential.

3.7 GOVERNMENT

3.7.1 City Organization

The City of Indio is a general law city and is therefore governed by a Council-Manager system, (see Figure 3.7-1 for City organization chart). The citizens of Indio elect their City Council through a general election of the City. The position of Mayor of Indio is an appointed position and is decided by a vote of the City Council.

Official City Council meetings are held at the City Council Chambers, 150 Civic Center Mall, in the City of Indio. Regular meetings of the City Council are held on the first and third Wednesdays of each month at 4:00 p.m.

The office of City Manager is appointed by the City Council based solely on his/her executive and administrative qualifications. The City Manager is the administrative head of the City government under the direction and control of the City Council.

The Planning Commission is the planning agency of the City, and its seven commissioners are appointed by the Mayor, subject to approval of the City Council. Regular meetings of the Planning Commission are held the second and fourth Wednesday of each month at 7:00 p.m.

The City of Indio currently has a number of agencies and authorities, boards, commissions, and committees that work on specific issue areas in the community; these are listed in Table 3.7-1.

3.7.2 General Plan Update

This document is part of the comprehensive update to the City's General Plan. The previous general plan was adopted in 1978 and therefore, due to the age of the plan and changes in the City and legislation, it was necessary for the City to update the General Plan.

This General Plan update was carefully organized to facilitate periodic updates and revisions to ensure currency of information by combining the Environmental Setting Report, Goals and Policies, and Environmental Impact Report sections into a single document.

3.7.3 Fast Tracking

The City currently has a program to expedite permit approvals in the CVEZA. This program is used to encourage development in this area.

3.7.4 Environmental Review

The City presently has an adopted Initial Study checklist for specific projects to determine what type of environment documentation if any would be necessary.

3.7.5 Assessment Districts

Assessment districts are used to facilitate the development of infrastructure through the provision of funding that is later repaid by property owners benefitting from the improvements. The City recently initiated an assessment district for a portion of Shadow Hills. This district is Phase I of an overall plan to facilitate development of needed infrastructure in the area. Phase I includes monies for water, sewer, and street improvements. Further phases will be developed in the future when boundaries are determined.

The City also has a community facilities district and several lighting and landscaping districts throughout the community. No Mello-Roos districts have been formed to date. However, the DSUSD is currently evaluating such a device to help enhance funding for schools in the area.

3.7.6 Redevelopment

The City of Indio currently has two redevelopment areas. The first area is the Indio Centre Redevelopment Area. As shown on Figure 3.7-2, this area covers approximately 880 acres centered around the downtown portion of the City. The second area is the Date Capital Redevelopment Area which is located on the northeast and southwest sides of the Indio Centre project. This project area covers approximately 1,600 acres.

The Redevelopment Agency, which oversees the preparation, adoption, implementation, and financing of redevelopment projects, is controlled by a Board

Table 3.7-1

AGENCIES, AUTHORITIES, BOARDS, COMMISSIONS, AND COMMITTEES

AGENCIES AND AUTHORITIES

Sunline Transit Agency
Civic Center Authority
Independent Cities Lease Finance Authority
Independent Cities Risk Management Authority
Indio Housing Authority
Industrial Development Authority
Mortgage Revenue Bond Authority
Public Finance Authority
Redevelopment Agency

BOARDS

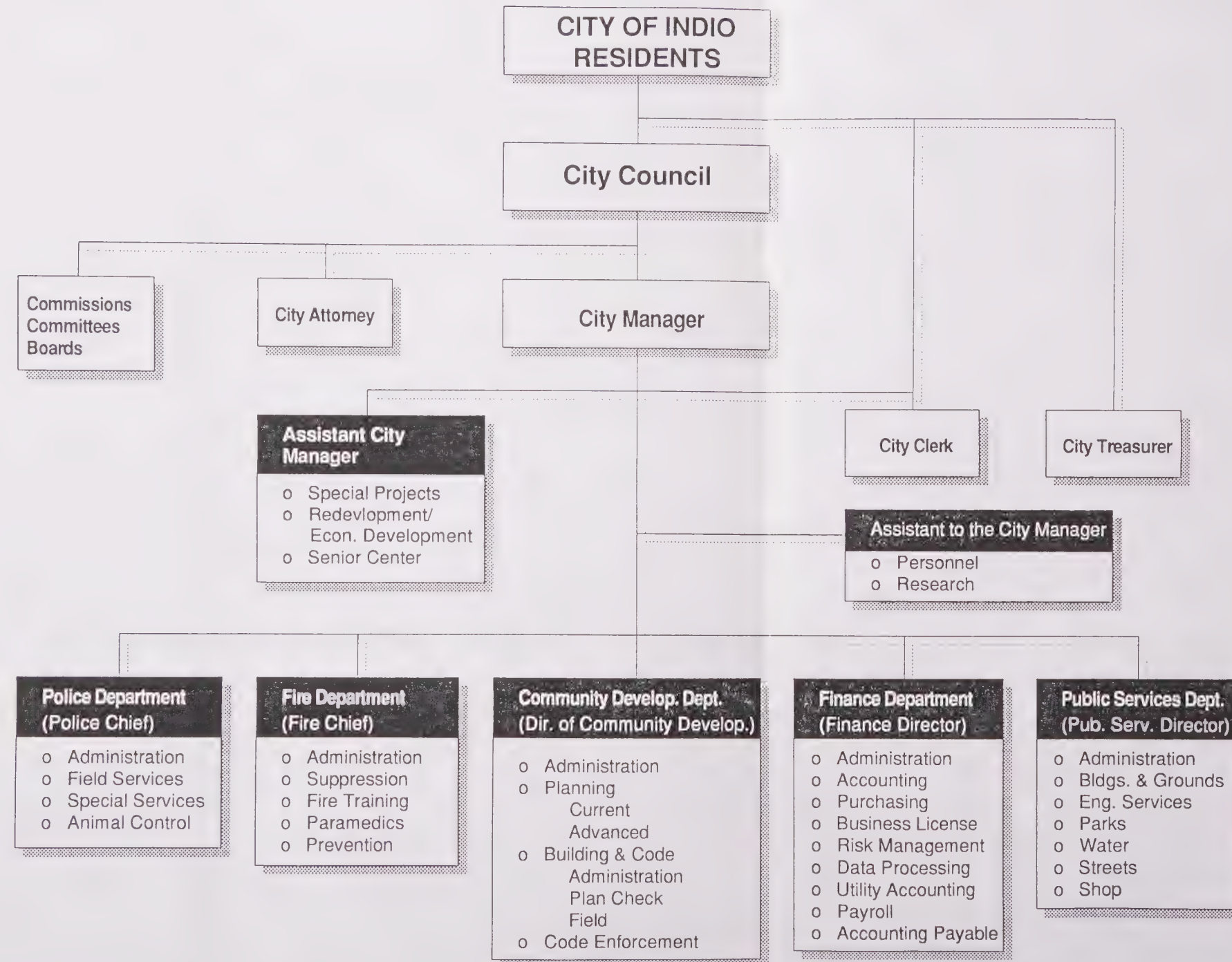
Building and Housing Appeals Board
Fire Code Appeals Board
Relocation Appeals Board (Indio Fashion Mall Project)
Business Improvement District Board

COMMISSIONS

Commission on Aging (Sr. Center Advisory Commission)
Cultural Arts Commission
Mobile Home Fair Practices Commission
Planning Commission

COMMITTEES

Disability Advisory Review Team
Safety Committee
Economic Development Committee (Redevelopment Agency)
Equestrian Advisory Committee
Goals and Policies Committee
Traffic Advisory Committee
Sign Committee
Alternatives for Revenue/Service Enhancements
Investment Committee
Capital Improvement Program Committee
Business Recruitment Committee
Information Systems Steering Committee
Radio Communications Steering Committee
Indio Recreation Advisory Committee
Development Standards Advisory Body
Disaster Preparedness Committee

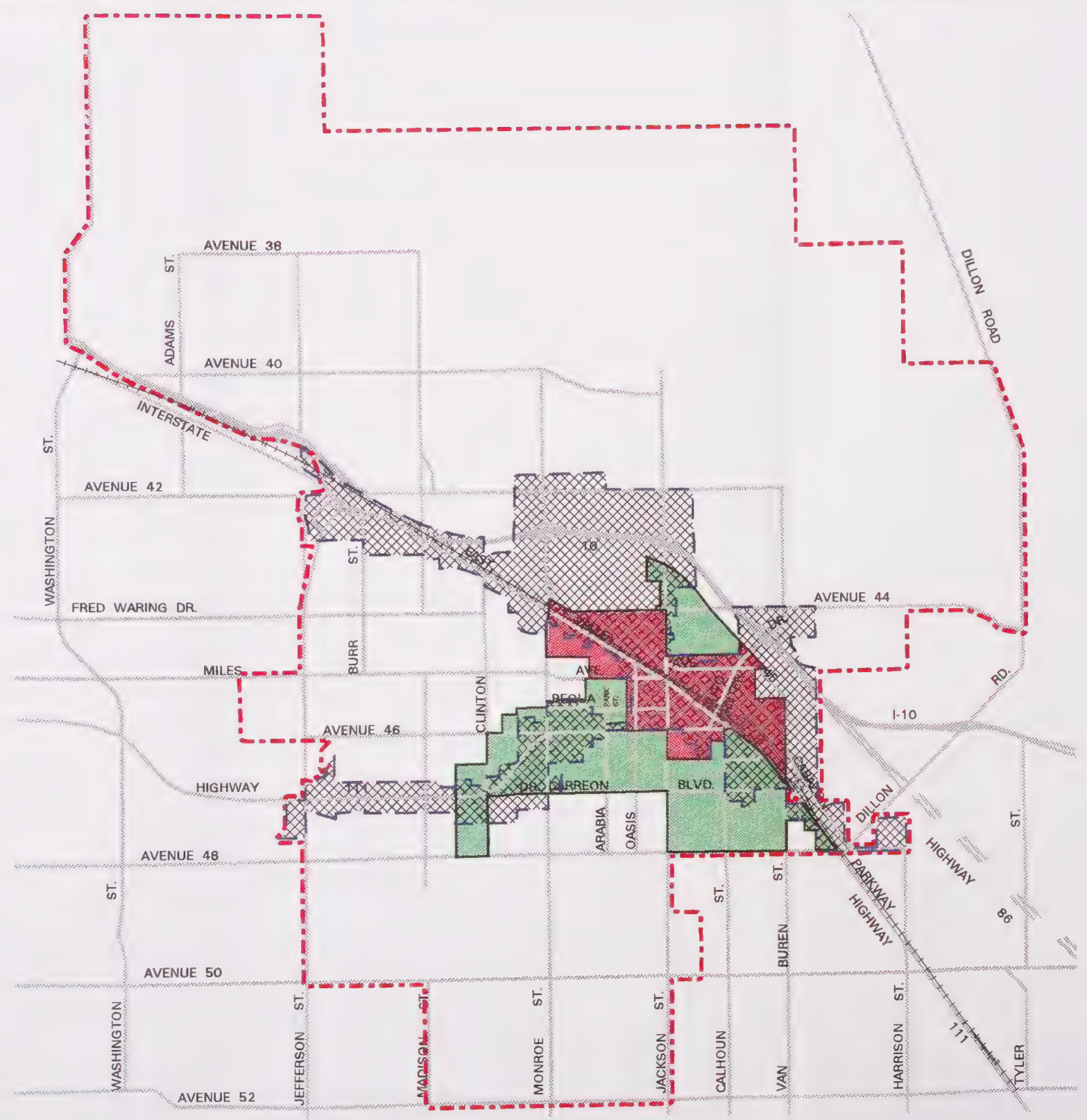
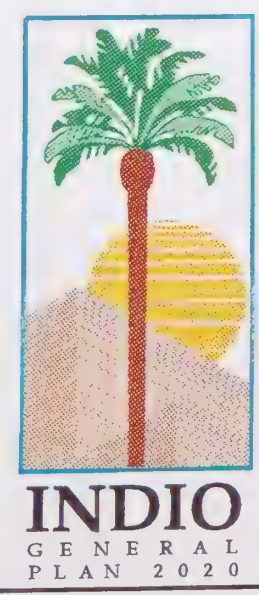


INDIO
GENERAL
PLAN 2020

Figure 3.7-1
INDIO GOVERNMENT
ORGANIZATION CHART




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Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



Explanation

- Indio Centre Redevelopment Area
- Date Capital Redevelopment Area
- Coachella Valley Enterprise Zone

Figure 3.7-2
REDEVELOPMENT AREAS
AND ENTERPRISE ZONES

 **Chambers Group, Inc.**
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Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



of Directors that is comprised of the City's five City Council members. The Redevelopment Agency is working for Indio to rehabilitate rundown or poorly constructed buildings, revitalize commercial areas through investment and infrastructure improvements, help to attract job producing industries into the City, and develop a balanced mix of housing that is affordable to a wide-range of individuals.

3.7.7 Coachella Valley Enterprise Zone Authority

The CVEZA was established November 11, 1991 and is comprised of approximately 29,000 acres in the eastern end of the Coachella Valley. Of the area in the CVEZA, approximately 3,550 acres are in the Planning Area (see Figure 3.7-2). The CVEZA was established to give businesses financial incentives to increase their net profit. Through state income tax credits, as well as investment and employment incentives, businesses physically located within the CVEZA can significantly reduce their California income tax obligation for up to fifteen years. Local government, at both the county and municipal level, have gone further and committed themselves to "fast tracking" site plans for projects of a "manufacturing or industrial nature" (see Section 3.7.3 above).

ENVIRONMENTAL RESOURCES

4.1 OPEN SPACE

4.1.1 City of Indio

The current City of Indio General Plan does not contain a specific land use designation for "open space," and no areas within the City are marked for preservation. Within the City, large areas remain as undeveloped, in agricultural production, or as developed parks.

Within the updated General Plan, "open space" is defined as areas designated for the preservation of natural characteristics of the landscape and the vegetation and wildlife present within these areas. Developed park land and agricultural lands are discussed as separate items within the General Plan. Refer to Section 3.4.5 for a discussion of parks and Section 4.3 for a discussion of agricultural resources.

INDIO FACTS: *Indio's current General Plan does not have any areas designated as open space.*

4.1.2 Unincorporated Areas

The County of Riverside General Plan Open Space and Conservation Element designates areas with significant open space to be retained and resources to be conserved. Within the unincorporated portions of the Planning Area north of I-10 (referred to as the Shadow Hills area), significant amounts of open space exist.

Under the County General Plan, designations for these open space lands include Mountainous, Desert, Agriculture, Water Resources, and Parks/

Forests areas. These areas are inventoried on the Open Space Conservation Map, Composite Hazards Map, Composite Resources Map, and the Western Coachella Valley Plan Land Use Map contained in the County General Plan. Figure 3.1-1 shows the County-designated open space areas within the Planning Area, and the following sections describe the designations for these areas.

Mountainous Areas

The areas designated as mountainous are located in a portion of the Indio Hills, in the north/northeast corner of the Planning Area. The County defines mountainous areas as those areas that are larger than 10 acres in size and have slopes greater than 25 percent. Permitted land uses include limited recreational uses, limited single-family residential (one dwelling unit per 10 acres), landfills, compatible resource development, and governmental uses. The intent of this designation is to recognize the constraints due to the remoteness and steep slopes of these areas, minimize potential hazards, and conserve and protect natural resources.

Desert Areas

Desert areas are unimproved, nonirrigated lands. Within the Planning Area, the areas designated by the County as desert lie south of the Indio Hills between the base of the hills and the areas designated as water resource areas (along the Coachella Canal). Desert areas are characterized as areas with a lack of water and other services and poor access. Land uses permitted are the same as those listed above for mountainous areas.

Agriculture Areas

Agricultural areas include areas with intense agricultural uses or long-term commitment to

ENVIRONMENTAL RESOURCES

agriculture, agricultural preserves, and prime agricultural lands. Permitted uses include limited commercial, industrial, and residential (one dwelling unit per 10 acres) uses associated with agriculture, open space, farm labor housing, landfills, compatible resource development, and governmental uses. Within the Planning Area, the majority of City- and County-designated agricultural land is located north of the City's urban core. Prime farmland is also located in the northwest corner of the Planning Area (see Section 4.3 for details). Portions of the extensive agricultural lands to the east and south are also within the boundaries of the City and the Planning Area.

Water Resource Areas

These areas include rivers, floodways, lakes, and reservoirs, and allow limited recreational uses. The CVSWC and the All American Canal are the major watercourses that traverse the Planning Area. The flood detention areas consisting of the levees and berms around the canal and a portion of the floodplain near the eastern boundary of the Planning Area are designated as water resource areas. The CVWD has large holdings in the Shadow Hills area. These facilities are primarily the East Side Dike and lands behind the dike that are used for retention purposes.

Parks and Recreation

Recreational areas consist of parks, regional trails, and community open space within developments that are set aside to conserve natural and manmade resource and hazard areas. Recreational uses and limited resource development are permitted, as allowed by park authorities. Section 3.4.5 presents a summary of park and recreation facilities available in the Planning Area.

4.2 SOILS

Information on soils of the Indio area was taken from a soil survey by the United States Department of Agriculture (USDA), Soil Conservation Service (SCS) entitled "Soil Survey of Riverside County, California, Coachella Valley Area" (Knecht 1980).

4.2.1 Soil Classifications

Soils are classified according to their inherent physical and chemical characteristics, and productivity. The most general level of classification is by soil association. A soil association defines a landscape with a distinctive pattern of soils in defined proportions. It can consist of one or more major soils and at least one minor soil. The association is named by the major soils present (for instance, the Myoma-Indio-Gilman association). The soils within an association vary in depth, stoniness, drainage, and other characteristics that may affect their management. These broad classifications provide a general idea of the soils present in a survey area and are useful for comparing parts of that area or locating large tracts that may be suitable for particular types of land uses.

The soil associations in the Coachella Valley survey are grouped into two general kinds of landscapes for broad interpretive purposes. Figure 4.2-1 is a general soils map that shows the soil associations within the Planning Area.

One group of associations consists of sands to silty clays formed in coarse to fine-textured alluvium, containing varying amounts of gravel stones and cobbles. They are at elevations up to 1,800 feet above sea level, on slopes ranging from 0 to 30 percent. Five associations in this group make up approximately 66 percent of the Coachella Valley Area. These soils are typically used for a variety of agricultural uses, including irrigated pasture, field crops, dates, citrus, and grapes. The majority of the Planning Area consists of these soil associations.

The second group of associations consists of sands to very gravelly sandy clay loams, with varying amounts of rock outcrop, formed in alluvium and in place in uplands. They are found in elevations ranging from 50 to 5,200 feet and on slopes from 0 to 75 percent. The remaining 34 percent of the

Coachella Valley Area consists of the five associations in this group. Within the Indio Planning Area, these soil associations are found in the northeast portion in the Indio Hills area. These soils mostly contain native vegetation. Typical uses include watershed, wildlife habitat, and recreational land uses.

Soil surveys are based on soil profiles that show the sequence of layers (horizons) in a soil. Soils with profiles that are almost alike (in characteristics such as thickness and arrangements) make up a soil series. Within a series, soils can differ in texture of the surface layer. Each series is named for a geographic feature that marks the place where a soil of that series was first observed and mapped (for instance, the Coachella Series). Table 4.2-1 lists the soil series that are found in the Coachella Valley (and the Planning Area). Soil series are further divided into phases, based on differences that may affect use of the soils. For example, Coachella fine sandy loam is a phase within the Coachella series.

The SCS classifies soils according to several factors including geologic content, pH balance, slope, permeability, thickness, and susceptibility to erosion. Soil maps generated from SCS surveys show areas of individual soils, known as mapping units, overlaid onto aerial photographs of U.S. Geological Survey (USGS) 7.5-minute quadrangles. Mapping units are generally made up of soils of different series, soils of one series and a land type, broadly mapped soil groups and a land type, and soil complexes. Detailed descriptions of soil series and mapping units are contained within the SCS soil surveys. The Indio Planning Area is located within four quadrangles, including Myoma, West Berdoo Canyon (Lost Horse Mountain), Indio, and La Quinta.

In addition to classifications based on physical and chemical properties, the SCS survey also classifies soils relative to their use and management. Soils are described by their engineering properties, such as USDA texture, moisture, and density. Descriptions and classifications of soils for a particular area or region are also associated with diverse land uses, including agricultural resources, building site development, sanitary facilities, water management, construction materials, recreational development, and wildlife habitat potential.

Table 4.2-1

SOIL SERIES IN COACHELLA VALLEY

Map Unit	Soil Series
BA	Badland
BP	Borrow pits
BtE	Bull Trail stony sandy loam, 9 to 30 percent slopes
CaD	Cajon loamy sand, 5 to 15 percent slopes
CbD	Cajon variant, 2 to 15 percent slopes
CcC	Carrizo stony sand, 2 to 9 percent slopes
CdC	Carsitas gravelly sand, 0 to 9 percent slopes
CdE	Carsitas gravelly sand, 9 to 30 percent slopes
CfB	Carsitas sand, wet, 0 to 5 percent slopes
ChC	Carsitas cobbly sand, 2 to 9 percent slopes
CkB	Carsitas fine sand, 0 to 5 percent slopes
CmB	Carsitas variant, 2 to 5 percent slopes
CmE	Carsitas variant, 5 to 30 percent slopes
CnC	Chuckawalla cobbly fine sandy loam, 2 to 9 percent slopes
CnE	Chuckawalla cobbly fine sandy loam, 9 to 30 percent slopes
CoB	Chuckawalla very gravelly sandy clay loam, 2 to 5 percent slopes
CoD	Chuckawalla very gravelly sandy clay loam, 5 to 15 percent slopes
CpA	Coachella fine sand, 0 to 2 percent slopes
CpB	Coachella fine sand, hummocky, 2 to 5 percent slopes
CrA	Coachella fine sand, wet 0 to 2 percent slopes
CsA	Coachella fine sandy loam, 0 to 2 percent slopes
Fa	Fluvaquents
Fe	Fluvents
GaB	Gilman loamy fine sand, 0 to 5 percent slopes
GbA	Gilman fine sandy loam, 0 to 2 percent slopes
GbB	Gilman fine sandy loam, 2 to 5 percent slopes
GcA	Gilman fine sandy loam, wet, 0 to 2 percent slopes
GdA	Gilman fine sandy loam, moderately fine substratum, 0 to 2 percent slopes
GeA	Gilman silt loam, 0 to 2 percent slopes
GfA	Gilman silt loam, wet, 0 to 2 percent slopes
GP	Gravel pits and dumps
IeA	Imperial silty clay, 0 to 2 percent slopes
IfA	Imperial silty clay, wet, 0 to 2 percent slopes
ImC	Imperial-Gullied land complex, 2 to 9 percent slopes
IoC	Imperial-Gullied land complex, wet, 2 to 9 percent slopes

Table 4.2-1

SOIL SERIES IN COACHELLA VALLEY

Map Unit	Soil Series
lp	Indio fine sandy loam
lr	Indio fine sandy loam, wet
ls	Indio very fine sandy loam
lt	Indio very fine sandy loam, wet
LR	Lithic Torripsamments-Rock outcrop complex
MaB	Myoma fine sand, 0 to 5 percent slopes
MaD	Myoma fine sand, 5 to 15 percent slopes
McB	Myoma fine sand, wet, 0 to 5 percent slopes
NaB	Niland sand, 2 to 5 percent slopes
NbB	Niland sand, wet, 2 to 5 percent slopes
OmD	Omstott coarse sandy loam, 5 to 15 percent slopes
Or	Omstott-Rock outcrop complex
RA	Riverwash
RO	Rock outcrop
RT	Rock outcrop-Lithic Torripsamments complex
RU	Rubble land
Sa	Salton fine sandy loam
Sb	Salton silty clay loam
SoD	Soboba cobbly sand, 2 to 15 percent slopes
SpE	Soboba stony sand, 5 to 30 percent slopes
TO	Torriorthents-Rock outcrop complex
TpE	Tujunga fine sand, 5 to 30 percent slopes
TrC	Tujunga gravelly loamy sand, 0 to 9 percent slopes
TsB	Tujunga loamy fine sand, 0 to 5 percent slopes

Source: Soil Survey of Riverside County California Coachella Valley Area (1980)

4.2.2 Soils Capability Classifications

Mapping surficial soils in the Coachella Valley area was completed in 1974 by the USDA SCS in cooperation with the University of California Agricultural Experiment Station (Knecht 1980). This detailed survey listed approximately 20 different soil types in the subject Planning Area and listed various properties of each individual soil, including soil capability ratings. Soil capability rating estimates the degree of agricultural limitations of a soil when used for field crops. The data from this study were compiled to produce the Soil Capability Map, Figure 5.6-2, in this report. Soils within the Planning Area were grouped by their agricultural capability rating into five limitation classes.

- Class I:** Soils have few limitations that restrict their use. Generally, these soils are considered to be the best suited for agricultural use.
- Class II:** Soils have moderate limitations that reduce the choice of plants or require moderate mitigation measures.
- Class III:** Soils have severe limitations that reduce the choice of plants and Irrigation Class I require special conservation practices.
- Class IV:** Soils have very severe limitations that severely reduce the choice of plants and require careful management.
- Class V:** Soils and landforms have limitations that generally preclude their use for commercial crop production and restrict their use to other ventures.

The regions of the Planning Area that lie south of the All American Canal contain soils with predominant few limitations (Class I). Along the southwestern portion of the Planning Area, there are various regions with moderate to severe ratings (Classes II and III). North of the All American Canal, the soil generally exhibits very severe limitations (Class IV). The regions within the Indio Hills typically are not considered to be viable areas for commercial crop production (Class IV and greater).

The USDA soil classifications found within the Planning Area and shown on Figure 4.2-1 have been summarized on Table 4.2-2 with respect to various properties pertinent to planning constraints and opportunities.

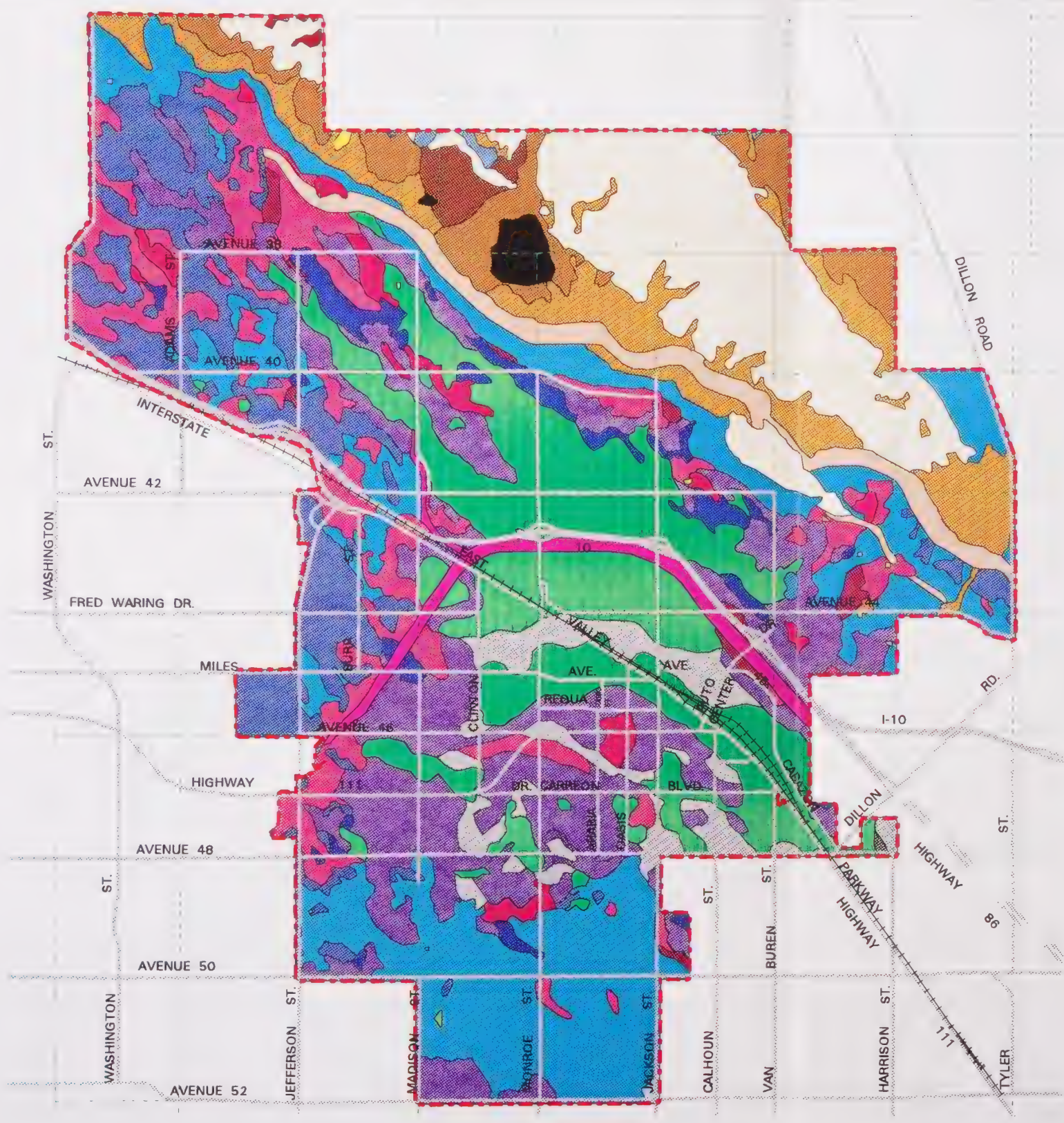
INDIO FACTS: *Soils in Indio range from a few inches to 5 feet or more in thickness.*

4.2.3 Planning Area

In general, soils in the Indio and Coachella Valley areas are relatively fine grained and range from clay to fine sand, with minor amounts of coarse sand. Soils in areas southeast of Indio tend to be coarse grained and rocky. The near-surface sand soils are generally loose to medium dense in consistency, whereas the near-surface clay and silt soils are soft to medium firm. The different soil types range in thickness from a few inches to 5 feet or more and are layered almost horizontally. Because of this layered structure, individual project sites within the Planning Area may be underlain by several different soil types, each with significantly different engineering characteristics and groundwater-bearing capacities (CBA 1991).

Emanating to the south out of the Indio Hills are various alluvial fans and coalescent bajada deposits of sand and gravel and boulders. These materials are typically loose and unconsolidated. Soil types for this area are characterized by the Chuckwalla-Badland association which contains well-drained sands, fine sandy loams, and gravelly sandy clay loams in the Indio Hills and on terraces. Vast regions of dunes consisting predominant of very loose, fine-grained sand are associated with the strong winds blowing from the northwestern end of the Coachella Valley (blowsand areas). Dune sand deposits are found along the southwestern portion of the SHIPP Study Area (SHIPP 1992).

In addition to being classified by soil type, soils are also rated according to their relative productivity and importance to agriculture. The soils within the Indio



Soil Types

- BA
- BP
- CcC
- CdC
- ChC
- CoB
- CoD
- CpA
- CsA
- Fe
- GP
- GaB
- Gab
- GbA
- GcA
- GeA
- GfA
- LR
- MaB
- MaD
- RU
- leA
- lp
- ls
- w

Figure 4.2-1
SOILS MAP



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Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

Table 4.2-2
SOIL CLASSIFICATIONS

Capability	USDA Class ¹	Shrink/Swell Potential	Permeability (in/hr)	Soil Erosion ² Potential		Wind Erosion Hazard ³	Septic Tank Limitations
				(K)	(T)		
I	Is	Low	.6 - 2.0	.55	5	4	Slight
	Gea	Low	.6 - 2.0	.37	5	NR	Moderate
II	GbA	Low	.6 - 2.0	.37	5	NR	Moderate
	Ip	Low	.6 - 2.0	.37	5	3	Slight
	CsA	Low	2.0 - 6.0	.15	5	2	Slight
III	CpA	Low	2.0 - 6.0	.15	5	1	Slight
	GaB	Low	.6 - 2.0	.49	5	NR	Moderate
	MaB	Low	6.0 - 20.0	.15	5	1	Slight
	MaD	Low	6.0 - 20.0	.15	5	1	Moderate
IV	Cdc	Low	6.0 - 20.0	.10	5	NR	Slight
	CfB	Low	6.0 - 20.0	.10	5	NR	Severe
	CkB	Low	6.0 - 20.0	.15	5	NR	Slight
V & Greater	BA	NR	NR	NR		NR	NR
	Chc	Low	6.0 - 20.0	.10	5	NR	Slight
	GP	NR	NR	NR		NR	NR
	LR	NR	NR	NR		NR	Severe

NR = Not Rated

¹ USDA Soil Classification

BA Badland
Cdc Carsitas Gravelly Sand
CfB Carsitas Sand
Chc Carsitas Cobbly Sand
CkB Carsitas Fine Sand
CpA Coachella Fine Sand

CsA Coachella Fine Sandy Loam
GaB Gilman Loamy Fine Sand
GbA Gilman Fine Sandy Loam
GeA Gilman Silty Loam
GP Gravel Pits
Ip Indio Fine Sandy Loam

Is Indio Very Fine Sandy Loam
LR Lithic Rock Outcrops
MaB Myoma Fine Sand
MaD Myoma Fine Sand, 5-15% Slopes

² Soil Erosion Factors

K = Soils susceptibility to erosion by water - 0.10 low, .64 high
T = Maximum rate of soil erosion that can occur, tons/acre/year, without reducing crop production or environmental quality.

³ Wind Erosion Hazards

1 - Extremely Erodible
2 - Very Highly Erodible
3 - Highly Erodible
4 - Erodible

ENVIRONMENTAL RESOURCES

Planning Area are suited for agricultural and urban land uses. The classification of soils relative to important farmlands is discussed in Section 4.3.

4.3 AGRICULTURAL RESOURCES

Within Riverside County, agricultural production is the largest industry in terms of dollar value and provides employment for a significant portion of the County's residents. Currently, agriculture faces economic difficulties and continuing pressure from urbanization, foreign competition, and urban conflicts resulting in a rising demand for the conversion of agricultural lands to urban uses. Other problems, including rising costs of production, water, pesticides, and fuel, have also produced changes in agriculture. Consequently, those areas that remain in agricultural production represent a significant and important resource.

4.3.1 Agricultural Production

The County defines productive agricultural land as land "which is involved in a long-term, substantial investment to agricultural use, and which has a long-term economic viability for agricultural use." Some of the factors that affect economic viability of these lands include weather, water prices, crop selection management practices, commodity prices, and new technology. The main agricultural crops grown in the County include field and seed crops, tree and vine crops, vegetables, melons, and miscellaneous crops. The County encourages the retention and enhancement of existing productive agricultural lands. Land uses adjacent to these agricultural lands are required to be compatible to them. In some cases, protection is afforded by providing buffer areas that serve to create a transition between agricultural uses and higher intensity development (County of Riverside 1990).

Riverside County is the leading agricultural county in southern California. Figures for agricultural production in Riverside County are derived from four distinct districts: Riverside/Corona, San Jacinto/Temecula Valley, Coachella Valley, and Palo Verde Valley. Indio is located in the Coachella Valley District. According to the Annual Crop Report from the Agricultural Commissioner's Office, the gross valuation of agricultural crops in Riverside County for 1991 was \$1,042,857,200. Approximately 30 percent of the total crops in the County are from the Coachella Valley, \$31,000,000.

The major tree and vine crops grown in the Indio area are dates, grapes, and citrus. Major row crops include lettuce, corn, and carrots. Agriculture has been the predominant industry in Indio since the 1940s when importation of irrigation water from the Colorado River began via the Coachella (All American) Canal. Much of the agricultural land around the City to the west is still in active production. However, agricultural uses within the City continue to decline due to conversion to urban uses.

Most existing agricultural lands within the Planning Area are located to the north and northeast of Highway 111 within the Shadow Hills Study Area. The Del Webb Specific Plan site is located within unincorporated Riverside County in the northwestern portion of the Planning Area. This development includes 240 acres currently in table grape production.

The City of Indio currently has 982 acres of agricultural land uses (A), representing approximately 10 percent of the total developed acreage in the City (10,231 acres). Viable agricultural lands exist within the city proper, primarily to the north and south. However, many of these lands are undergoing transition to urban uses. For example, the proposed Monroe Street and Avenue 42 Street development site is in active agricultural production. Lettuce and corn are presently grown on the site. The eastern portion of the site is somewhat constrained for agriculture due to salt buildup from the site's previous cultivation for grapes. The entire 112-acre site is considered prime farmland, as is the majority of the surrounding property (Smith 1991). Another development on agricultural land within the City includes the proposed 240-acre Pacific Indio Mixed Use Development (JFD 1991). This site is currently in lettuce, sweet corn, and carrot production.

4.3.2 Williamson Act Land Preserves

The California Land Conservation Act, adopted in 1965, is also known as the Williamson Act. This voluntary program allows property owners to have their property assessed on the basis of agricultural production rather than on the current market value. The property owner is relieved of having to pay

INDIO FACTS: *Indio has 982 acres of land zoned agricultural land uses, which represents 10% of the City's total developed acreage.*

higher property taxes as long as the land remains in agricultural production. The purpose of the Act is to encourage property owners to continue to farm their land and prevent the premature conversion to urban uses. Participation requires that the area consist of 100 contiguous acres of agricultural land under one or more ownerships. The application is submitted and reviewed by Riverside County. Upon approval, the agricultural preserve is established, and the land within the preserve is automatically restricted to agricultural and compatible uses for 10 years. Williamson Act contracts are automatically renewed annually for 10 years unless the property owner applies for nonrenewal or early cancellation.

As part of the Williamson Act, the State also provides subventions to local participating governments. Subventions provide fiscal assistance to local governments that take part in the land preservation program. The purpose is to provide incentive for governments to take on these contracts by partially replacing property tax revenues lost on contracted lands and offsetting some local costs for administering the program. A formula allocates funds according to three categories of land. Per-acre amounts are established for urban prime, other prime, and nonprime lands.

Within the Planning Area, 200 acres are in Williamson Act Preserves (California Department of Conservation, personal communication May 1992). None are in subvention, and all are undergoing nonrenewal. One preserve is within the City limits. The remaining preserves are within unincorporated County of Riverside, within the Shadow Hills Study Area (see Figure 4.3-1).

4.3.3 Important Farmland Inventory

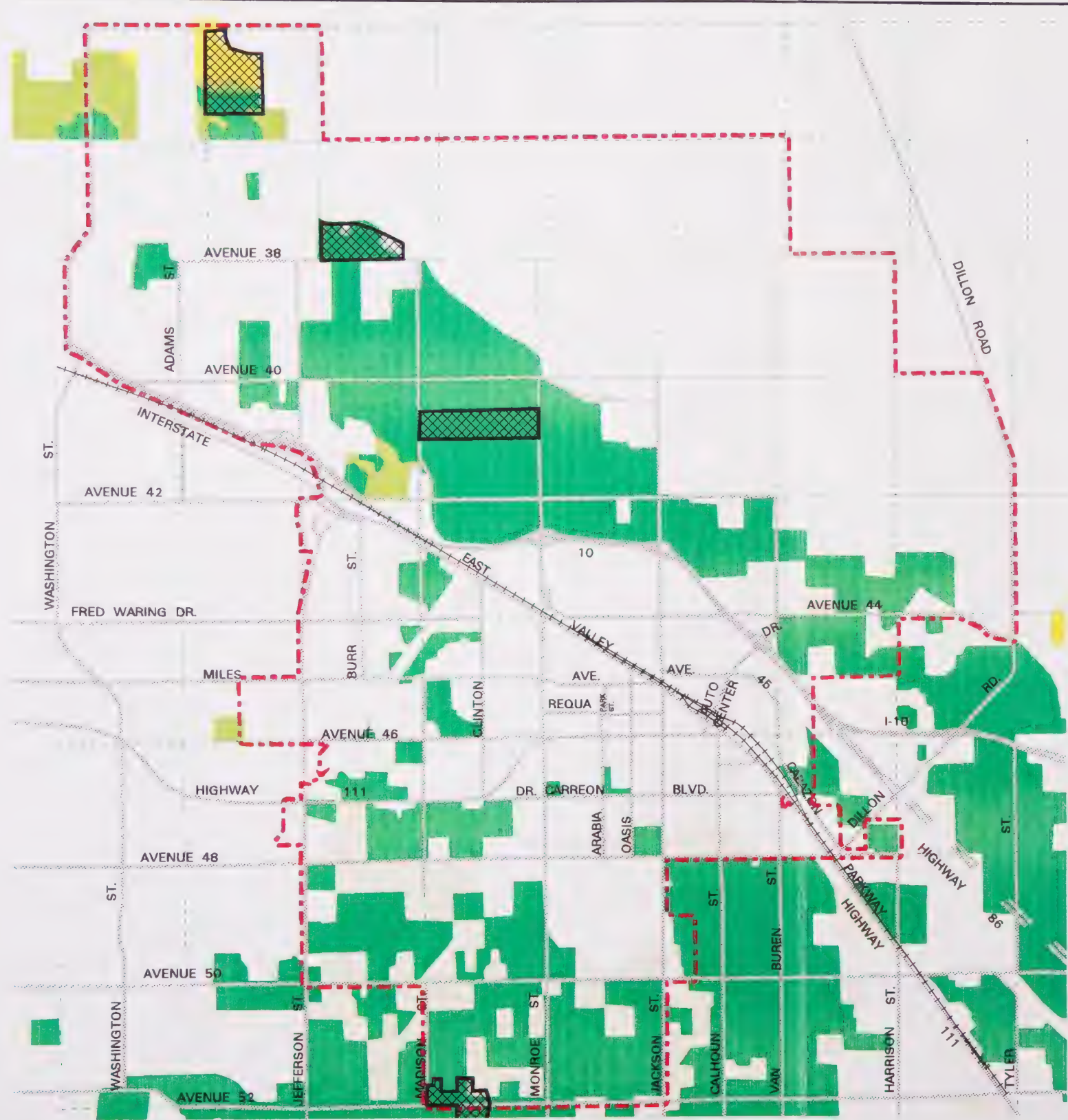
State and federal agencies have established several classifications of important agricultural land, based on factors such as soil characteristics, climate, and water supply. The SCS uses the Land Capability Classification System that groups soils into eight categories (Classes I-VIII) according to soils and climate characteristics of surveyed sites. The classes indicate limitations of the soil in terms of agricultural productivity. This system is used by the SCS, in conjunction with the State Department of Conservation, Office of Land Conservation, to use the Farmland Mapping and Monitoring Program that inventories and maps these important farmland areas. Figure 4.3-1 shows the important farmlands within the Indio Planning Area. The farmland classifications are defined below in order of their value as agricultural lands.

Prime Farmland: Prime farmland is land with the best combination of soil quality, water supply, and growing season needed to produce sustained high yields of agricultural crops. These lands generally have a rating of Class I or II (prime) soils in the SCS land use capability classification. These lands are best suited for producing food, feed, forage, fiber, and oilseed crops and are also available for uses as cropland, pasture land, rangeland, and forest land.

Farmland of Statewide Importance: Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. This land is also available for the aforementioned land uses, except for urban builtup land and water. These lands may hold more water, be more saline or alkaline, and have a moderate erosion hazard.

Unique Farmland: Unique Farmland is land other than prime or of statewide importance that is currently used for growing specific high-value food and fiber crops, such as citrus, avocados, artichokes, dates, and other fruits and vegetables. Soil and irrigation characteristics are not defined.

Farmland of Local Importance: Local agencies and the County identify and designate lands that are important to the local economy but do not meet the criteria for the other classifications.




Farmland Categories

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance

Source: Calif.
Dept. of Conservation,
Farmland Mapping and
Monitoring Program

Williamson Act Lands

Figure 4.3-1
IMPORTANT FARMLANDS

**Chambers Group, Inc.**
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical


1" = 6000'



4.4 WATER RESOURCES

Information on water resources was taken from the Department of Water Resources, Bulletin No. 108, Coachella Valley Investigation (July 1964), the Proposed Coachella Valley Enterprise Zone DEIR (CBA 1991), and portions of the Coachella Valley Master Environmental Assessment (MEA) which cites studies by the Coachella Valley Water District (CVWD), including the Coachella Valley Groundwater Management Plan (April 1979).

4.4.1 Regional Setting

Coachella Valley is about 65 miles long on a northwest-southeast trending axis, and covers about 440 square miles. It is bordered by the San Jacinto-Santa Rosa Range to the west, the San Bernardino Mountains to the north, and the rugged and barren mountain ranges of the Colorado Desert to the east.

The Valley is located within the Whitewater hydrological unit (Whitewater River Basin). The Whitewater hydrological unit also contains the regions of Morongo, Shavers, and San Geronio, and is one of 27 hydrological units established within the Colorado River Basin. The unit is a large, inland basin which extends between the San Bernardino and San Diego County lines. The watershed encompasses approximately 1,600 square miles and ranges in elevation from over 11,000 feet above sea level at San Geronio Peak to more than 200 feet below sea level at the Salton Sea.

4.4.2 Surface Water

The Whitewater River system flows south and southeastward approximately 20 miles through mountainous areas, through the valley and the Planning Area, and drains into the Salton Sea. The Salton Sea is a saline sink cut off from the Gulf of California by the delta of the Colorado River. Tributaries from the surrounding mountains flow toward the valley. The stormwater flows enter the Coachella Valley through a series of ephemeral streams and multiple alluvial fans, and travel towards the CVSWC.

The CVSWC is the major drainage course through the Coachella Valley. The river flows through the

Coachella Valley in a southeasterly direction, then veers northeast around the intersection of Highway 111 and Jefferson Street. From this approximate point, the river course becomes the CVSWC, loops around the central city area and conveys the tributary drainage to the north and then southeast via a large 500± foot wide improved dirt channel. The river/channel course is normally dry most of the year, flowing only during periods of heavy rainfall or substantial runoff from nearby mountain areas, or as a result of treated wastewater discharge. Its headwaters are within Whitewater Canyon northwest of Palm Springs, and its direction of flow is generally toward the southeast. Currently, the Army Corps of Engineers and CVWD are studying the channel for further improvements (CBA 1991).

The Coachella Canal was constructed in 1948 as a branch of the All-American Canal. The canal flows in a northwesterly direction through the northern reaches of the valley then traverses south approximately parallel with Madison Street through the City of Indio, to its termination point at the 200-acre Lake Cahuilla reservoir. The canal transports Colorado River water to agricultural areas in the Eastern Coachella Valley. Colorado River water is used primarily for irrigation and for recreation at Lake Cahuilla reservoir. Approximately 340,000 acre-feet of water are delivered annually through the Coachella Canal (CBA 1991). A network of very large levees, berms, and drainage channels were constructed to protect the Canal, the largest of which is the East Side Dike. The levees are designed to collect, detain, and reduce storm flows to reduce peak runoff prior to outletting flow into the CVSWC south of I-10.

4.4.3 Reclaimed Water

Reclaimed water is supplied from the CVWD wastewater treatment plant located at Avenue 38 and Madison Street. CVWD encourages the use of reclaimed wastewater to irrigate landscaping, golf courses, agriculture, and manmade lakes and ponds. Currently, the CVWD supplies country clubs with tertiary treated waste water for irrigation of golf courses and landscaped open space (Psomas 1991).

INDIO FACTS: *Reclaimed water is currently used on golf courses and landscaped open space.*

4.4.4 Groundwater

The Coachella Valley Groundwater Basin is bounded by the San Bernardino and Little San Bernardino Mountains to the north and northwest, and on the west side by the Santa Rosa and San Jacinto Mountains (Figure 4.4-1). The upper boundary is formed by the trace of the Banning Fault on the north side of San Gorgonio Pass, while the lower boundary is formed by the watershed of the Mecca Hills and by the northwest shoreline of the Salton Sea. The basin has an area of 690 square miles and 12,000-foot depth to consolidated rocks. It has an estimated total storage capacity of 39 million acre-feet of water, equal to more than 100 years of water delivered by the Coachella Canal.

The Planning Area is underlain by the Indio Subbasin. This subbasin comprises a major portion of the floor of the Coachella Valley and encompasses approximately 400 square miles. The subbasin has a capacity of about 29.8 million acre-feet. The San Gorgonio Subbasin is located north of the upper boundary of the Coachella Valley Groundwater Basin and is a significant contributor of water to the Indio Subbasin. The subbasin is separated from Mission Creek and Desert Hot Springs subbasins to the north and east by the Banning and San Andreas Faults and the Indio Hills. In general, boundaries of subbasins are based on faults that serve as barriers to the lateral movement of groundwater and can affect both water quality and the depth at which groundwater occurs. The Indio Subbasin is further divided into five subareas. The Indio Planning Area is underlain by the division known as the Thermal Subarea.

The extensive groundwater basin in the Thermal Subarea flows southeastward and has a shallow water table. Confined or semiconfined groundwater conditions are present in the major portion of this subarea. Groundwater occurs in three separate

aquifers that comprise different lithologic zones. These aquifers are referred to as the semiperched, the upper, and the lower aquifers, as follows.

- ▶ **Semiperched Aquifer:** A semiperched aquifer is a shallow zone and consists of fine-grained lake sediments, including Recent silts, tight clays, and minor amounts of fine sand. This surficial zone is confined to the relatively recent interbedded stream and lake bed deposits of ancient Lake Cahuilla. Southeast of Indio, these deposits range from 0 to 100 feet thick and serve as an effective barrier to deep percolation. North and west of Indio, the zone consists of clayey sand and silts and are more permeable than the soils to the southeast. This aquifer extends from the Salton Sea to approximately 2 miles northwest of Indio.
- ▶ **Upper Aquifer:** The upper aquifer consists of older alluvium that underlies the fine-grained lake sediments and has an approximate thickness of 150 to 300 feet. Subsurface inflow to this zone is less than that to the lower aquifer.
- ▶ **Lower Aquifer:** The lower aquifer is the deepest and most important source of groundwater supply in the Coachella Valley Groundwater Basin. The top of the lower aquifer zone is present at a depth ranging from 300 to 600 feet below the surface. It is reported that the zone is at least 500 feet thick and may be in excess of 1,000 feet. The lower aquifer is separated from the upper aquifer by an aquitard zone of fine-grained sediments. The aquitard is generally 100 to 200 feet in thickness. North and west of Indio in an arcuate zone approximately 1 mile wide, the aquitard is apparently absent, and no distinction is made between the upper and lower aquifer zones.

The elevation of this groundwater zone drops gently toward the flow direction. In general, the flow of groundwater is toward the Salton Sea. Within the Shadow Hills Study Area, the elevation of this aquifer varies from approximately 10 feet above sea level in the northwestern regions to approximately 50 feet below sea level along the southeastern regions (SHIPP 1992). At any given location, the depth of the water table is a function of the permeability characteristics of the widely varied



Explanation

- Essentially Nonwater-Bearing Rocks
- Essentially Semiwater-Bearing Rocks
- Approximate Extent of the Shallow Semiperched Groundwater Body
- Investigational Boundary Area
- Groundwater Basin Area
- Groundwater Subbasin Boundary Dashed Where Approximate
- Groundwater Subbasin Boundary
- Boundary of Area in Which Upper and Lower Aquifer Zones Are Definable
- Contours of Elevation on the Top of the Lower Aquifer Zone

Source: Pacific Indio Properties EIR, October 1990

Oasis Landfill

Figure 4.4-1
GROUND WATER BASINS



INDIO
GENERAL
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Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 7 miles

subsurface soils, the irrigation, and groundwater pumping practices locally in effect, and the presence or absence of drain lines in agricultural areas. Potential for liquefaction is associated with the semiperched zone due to its shallow water table (CBA 1991).

The above aquifers are recharged primarily by subsurface inflow and excess applied irrigation water (Colorado River water). Groundwater volumes in the region are constantly fluctuating as a result of variations in subsurface inflow and outflow, artificial recharge, and extractions (CBA 1991). Precipitation is less than 4 inches per year and does not significantly contribute to long-term recharge in the basin. The historic fluctuation of water levels within the subbasin is indicative of a steady decline of the levels throughout the subbasins prior to 1949. Colorado River water has been imported since 1949 and has been applied to the southern half of the Whitewater Subbasin, resulting in a rise in water levels of the Thermal Subbasin. In general, groundwater levels in the upper Coachella Valley continue to drop, resulting in an overdraft of groundwater. The Desert Water Agency (DWA) and CVWD have established a recharge program as part of their best management practice to ensure adequate water supply in the valley. Currently, both import Colorado River water for irrigation and recharge via the Coachella Canal (All American Canal).

The Coachella Valley Master EIR and the Coachella Valley Groundwater Management Plan, April 1979, provided estimates of overdraft and net gains for selected years in the Upper Coachella Valley. In most years, overdrafts are believed to occur. However, the quantity of overdraft decreased from 52,700 acre-feet in 1970 to a projected 13,500 acre-feet per year in 1990 after Colorado River recharge. The overdraft is expected to increase to 28,500 acre-feet per year by the year 2000 (Psomas 1991).

4.4.5 Water Use and Supply

Historically, groundwater has been the principal source of water for domestic and agricultural uses in the Coachella Valley. The primary water purveyors in the Valley are the CVWD and the DWA. Both have contracted with the State of California for State Water Project entitlements.

The CVWD was formed in 1918 to deliver a continuous supply of water for irrigation and to provide a main drainage system for reclamation and flood control. Currently, CVWD serves approximately 637,000 acres in Riverside County and in parts of Imperial and San Diego Counties. CVWD took over the Southern California Water Company in 1985 and subsequently made extensive improvements to the existing system. The current water transmission system consists of underground gravity flow concrete pipelines and is considered adequate to meet existing needs. However, outlying rural areas are not served by domestic water lines, and CVWD has not prepared any master plans of future transmission lines (CBA 1991).

CVWD has recently indicated that supplemental urban water has been assured to the year 2035. This will be accomplished through an exchange agreement among the CVWD, the DWA, and the MWD. This agreement will allow for imported Colorado River water to continually recharge the upper portion of the Indio Subbasin (CBA 1991).

4.4.6 Domestic Water Service

Domestic water service is provided by the City from several reservoirs and wells within the City. The City of Indio Public Services Department is the purveyor of domestic water to the City. Eleven wells are currently used to supply potable water to approximately 42,000 customers. The majority of reservoirs and wells within the Planning Area are located south of the CVSWC and the I-10. The City maintains three storage tanks, each with a 2.0-million-gallon capacity. The existing transmission system can extract enough groundwater to meet the City's current water demand. The City has proposed construction of two wells, two reservoirs, and two booster stations to increase the system's capacity for future needs to withdraw the groundwater (CBA 1991).

Current water delivery in the Shadow Hills area is extremely limited. The area has been designated for domestic service by the City and the CVWD. The Del Webb Specific Plan area in the northwest corner of the Shadow Hills study area is within the jurisdictional boundaries of the CVWD. However, the District has no facilities within the project boundaries and is not currently providing water service to any of the existing properties within the

ENVIRONMENTAL RESOURCES

project area. Water supply is from private wells (Psomas 1991). Imported water for irrigation and recharge is provided by the CVWD from the Coachella Canal (SHIPP 1992).

4.4.7 Agricultural Water Service

Imported Colorado River water is the primary source of water used to irrigate agricultural land within the Planning Area. CVWD has imported Colorado River water through the All American Canal for irrigation purposes in the Eastern Coachella Valley since 1948. The District maintains an extensive irrigation distribution system within Coachella, Indio, and the unincorporated areas of Thermal and Mecca. Approximately 90 percent of the agricultural water in the Eastern Coachella Valley area is supplied by CVWD. Private wells supply the remainder of the agricultural water supply. Approximately 275,000 acre-feet of water (896 million gallons) were used to irrigate croplands within the eastern Coachella Valley during 1988 and 1989 (CBA 1991). Due to the limited amount of imported water available from the Colorado River, CVWD also maintains a water conservation program, which includes mandatory reductions in the amount of water used for agriculture.

4.4.8 Water Quality

Safe drinking water standards in the United States are regulated by the federal government through the Environmental Protection Agency (EPA). In California, these standards are enforced by the California Department of Health Services (DOHS). The Regional Water Quality Control Boards protect the quality of all ground and surface waters within their respective regions for all beneficial uses. The Regional Boards formulate and adopt water quality plans for specific ground or surface water basin, and prescribe and enforce requirements on all domestic and industrial water discharges. The specific discharge requirements to surface waters constitute California's implementation of the National Pollutant Discharge (NPDES) program under the Clean Water Act. Each board also directs cleanup of polluted groundwater within its territory. The Indio area is within the Colorado River Basin Region (Region No. 7).

4.4.9 Surface Water Quality

The quality of surface water depends on the watershed area, land use, location and sources of pollution, and the natural means of purification, such as sedimentation, sunlight, aeration, nitrification, filtration, and dilution.

Imported Colorado River water is moderately high in dissolved solids but is usable. The primary use is for agriculture. The water is calcium sulfate-rich with an average total dissolved solids (TDS) value of 750 milligrams per liter (mg/L). The relatively high calcium concentration of the water is considered beneficial to the agricultural soils. Water transported via the Coachella Valley Stormwater Channel is generally of poor quality with a mean TDS of 1,684 mg/L reported in 1980. The channel serves as the major drainage course for the region.

4.4.10 Groundwater Quality

Chemical contamination of a groundwater aquifer and of wells can result from spills, leaking gasoline and oil tanks, or improper disposal of chemical wastes such as dumping on the ground, in landfills, lagooning, or similar methods. Groundwater can also be contaminated by chemicals (pesticides) applied to agricultural soils and crops. The extent of contamination depends on the amount of material used, soil permeability, rate of water infiltration, and the persistence of chemicals.

In general, the development that has occurred in the Coachella Valley has resulted in an increase in the chemical constituents of groundwater. The arid nature of the area and the high dissolved solids content of the Colorado River water often result in over-irrigation of crops beyond consumptive use levels. Much of the excess water percolates into the groundwater basins. The excess water that filters through the surface soils due to over-irrigation and rainfall also transports fertilizers and pesticides that have been applied to agricultural areas. The extent of groundwater contamination that occurs also depends on the factors mentioned above.

4.5 BIOLOGICAL RESOURCES

4.5.1 Vegetation

Methodology

A reconnaissance botanical survey was conducted on June 23, 1992, by two botanists from Chambers Group, Inc. Prior to the survey, the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (Smith and Berg 1988) and the California Natural Diversity Database (CNDDB) were consulted to determine what, if any, threatened, endangered, or sensitive plant species might occur within the Planning Area. These records are organized by USGS 7.5-minute topographic quadrangles; quadrangles within and adjacent to the Planning Area were searched. Supplemental sources consulted were the City of La Quinta General Plan (1992), the County of Riverside General Plan (1989), the Coachella Valley Master EA (1979), the Biological Analysis and Impact Assessment of the CVEZA (1990), and the EIR for the Monroe Street and Avenue 42 Development for the City of Indio (1991). In addition a representative from the Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (CDFG) were consulted by telephone regarding special concerns or sensitive plant species. Roland DeGouvenain of BLM suggested no additions to the list and recommended less attention be given to high elevation species. Connie Rutherford of USFWS suggested the addition of Orcutt's woody aster (*Machaeranthera orcuttii* = *Xylorhiza orcuttii*) to the list as potentially occurring within the region. Glen Black of CDFG had no additional suggestions. A table from this literature and reference search was compiled (see Table 4.5-1).

The reconnaissance was conducted by surveying accessible areas, by vehicle or on foot, within the Planning Area. The basic plant communities observed were delineated on a topographic map, and a dominant species list for each area was compiled. A second map identifying areas containing habitat and plant communities with potential for containing sensitive species was produced.

Regional Characteristics

The habitat designations in the following discussion conform to those of the CNDDB (1986). Figure 4.5-1 shows the distribution of plant communities in the Planning Area. The undeveloped portions of the Planning Area are dominated by four desert plant communities: Sonoran desert scrub, chenopod scrub, stabilized and partially stabilized desert dunes, and desert fan palm oasis woodland. The remaining open areas in the Planning Area are occupied by fallow or producing agricultural fields, citrus and date palm orchards, abandoned orchards, and unimproved lots dominated by weedy annual grasses, all of which have no botanical significance with regard to natural plant communities or sensitive plant species and will not be included in the following discussion.

The most common of the desert plant communities is Sonoran desert scrub. This plant community is characterized by creosote bush (*Larrea tridentata*), with associated plants that include burr weed (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), brittlebush (*Encelia farinosa*), golden cholla, and beavertail cactus (*O. echinocarpa* and *O. basilaris*). Sonoran desert scrub is the most widespread plant community in the region, occupying flats, washes, and hillsides to the north, and to a lesser degree, in the south.

Chenopod scrub occupies flats in both the northern and southern regions of the Planning Area boundaries. Chenopod scrub is comprised of salt-tolerant shrubs primarily in the goosefoot family (*Chenopodiaceae*). Characteristic species in this community are saltbush (*Atriplex lentiformis*), allscale (*A. polycarpa*), salt grass (*Distichlis* sp.), species of mesquite (*Prosopis* sps.), and introduced species such as the highly invasive tamarisk (*Tamarisk ramosissima*).

The region contains two desert plant communities that are regarded as sensitive or rare for the area. These are communities of stabilized dunes and fan palm oases.

Stabilized and partially stabilized dunes occur in the western and easternmost regions of the Planning Area. This community consists of rolling expanses of sand that are intermittently vegetated with mesquite (*Prosopis* sps.), creosote bush and, in varying degrees, bunch grasses.

Table 4.5-1

SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING
IN THE GENERAL PLAN AREA - INDIO, CA.

Species	Common Name	Status	Life Form	Habitat	Probability of Occurrence
EUPHORBIACEAE <i>Ditaxis adenophora</i> ^{1,3,6}	Glandular Ditaxis	State:none Fed:none CNPS:2	perennial freely branching herb with woody base	sandy flats, creosote bush scrub, below 500 ft. Dec.-March	High
POACEAE <i>Erichloa aristata</i> ⁶	Awed Cup Grass	State:none Fed:none CNPS:2	annual grass, 30-80 cm tall	open ground, June-Nov.	Unable to determine
Sensitive Plant Species Known to Occur in Areas Adjacent to the General Plan Area					
ASCLEPIADACEAE <i>Cynanchum utahense</i> ³	Utah Cynanchum	State:none Fed:none CNPS:4	slender-stemmed glabrous perennial	dry sandy areas, creosote scrub, Sonoran scrub, below 3,000 ft. April-June.	Moderate to high
ASTERACEAE <i>Machaeranthera cognata</i> (<i>Xylorhiza cognata</i>) ⁴	Mecca Aster	State:none Fed:C3C CNPS:4	rounded, open-branched shrub	in gypsum clays, creosote scrub, shadscale scrub, below 500 ft. Jan.-June.	Moderate
<i>Machaeranthera orcuttii</i> (<i>Xylorhiza orcuttii</i>)	Orcutt's Woody Aster	State:none Fed:C2 CNPS:1B	shrubby perennial, woody at base	in gypsum clay soils, creosote scrub, below 1,000 ft. March-April.	Moderate
BORAGINACEAE <i>Cryptantha costata</i> ⁵	Ribbed Cryptantha	State:none Fed:none CNPS:4	coarse, stiff, few-branched annual	sandy, gravelly areas, creosote scrub, shadscale scrub, below 1,500 ft. Feb.-May.	High
EUPHORBIACEAE <i>Chamaesyce arizonica</i> ²	Arizona Spurge	State:none Fed:none CNPS:2	prostrate, matted to erect perennial	creosote scrub, Sonoran desert. March-April.	High
<i>Chamaesyce platysperma</i> ^{3,6}	Flat-seeded Spurge	State:none Fed:C2 CNPS:3	glabrous prostrate annual	sandy soil, creosote scrub; May.	High
<i>Ditaxis californica</i> ^{1,3,6,7}	California Ditaxis	State:none Fed:C2 CNPS:1B	glabrous perennial with woody base	rocky areas, sandy washes, alluvial fans of foothills or lower desert slopes, creosote scrub, 100-3,000 ft. March-May.	High
FABACEAE <i>Astragalus crotalariae</i> ⁵	Salton Milk Vetch	State:none Fed:none CNPS:4	coarse, malodorous annual or short-lived perennial	sandy flats, fans, creosote scrub, shadscale scrub, below 1,000 ft. Jan.-April.	High

Table 4.5-1

**SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING
IN THE GENERAL PLAN AREA - INDIO, CA.**

Species	Common Name	Status	Life Form	Habitat	Probability of Occurrence
<i>Astragalus lentiginosus</i> var. <i>borreganus</i> ^{3,6}	Borrego Milk Vetch	State:none Fed:none CNPS:4	perennial	dunes, sandy valleys; creosote scrub, below 1,000 ft. Feb.-May.	High
<i>Astragalus lentiginosus</i> var. <i>coachellae</i> ^{3,5,6,7}	Coachella Valley Milk Vetch	State:none Fed:C2 CNPS:1B	winter annual or short-lived perennial	Sandy areas, washes, fans, sometimes dunes, creosote scrub, below 1,200 ft.	High
<i>Astragalus tricarnatus</i> ⁶	Triple-ribbed Milk Vetch	State:none Fed:C2 CNPS:1B	loose, bushy perennial	gravelly areas, creosote scrub, joshua tree wldd, 1,400-4,000 ft., Feb-May.	Low
<i>Cassia covesi</i> ^{3,6}	Cove's Cassia	State:none Fed:none CNPS:2	low suffrutescent, pubescent shrub	dry washes, Sonoran desert scrub, below 2,000 ft, April-June	High
<i>Phaseolus wrightii</i> ⁶	Wright's Phaseolus	State:none Fed:none CNPS:3		Sonoran desert scrub	Low
LAMIACEAE <i>Salvia eremostachya</i> ³	Desert Sage	State:none Fed:c3C CNPS:4	intricately branched shrub	rocky and gravelly areas, creosote scrub, shadscale scrub, 1,200-4,500 ft. March-May.	High
<i>Salvia greata</i> ^{3,4}	Orocopia Sage	State:none Fed:C2 CNPS:1B	shrubby perennial	dry washes, fans; creosote scrub, shadscale scrub, below 600 ft. March-April.	High
MALVACEAE <i>Malacothamnus parishii</i> ³	Parish's Bush Mallow	State:none Fed:C2 CNPS:1B	white tomentose erect shrub	near San Bernardino, from 1,000-1,500 ft. June-July.	Unable to determine
MARTYNIACEAE <i>Proboscidea althaeifolia</i> ⁵	Desert Unicorn Plant	State:none Fed:none CNPS:4	coarse, spreading perennial	sandy areas, creosote scrub, shadscale scrub. Mexican Summer.	High
POLEMONIACEAE <i>Gilia maculata</i> ³	Little San Bernardino Mtn. Gilia	State:none Fed:C2 CNPS:1B	minute annual	sandy areas, creosote scrub, joshua tree wldd, Mojave scrub, shadscale, 500-4,000 ft. April-May.	High
RHAMNACEAE <i>Colubrina californica</i> ³	Las Aminos Colubrina	State:none Fed:C3c CNPS:4	intricately branched shrub	dry cysn, creosote scrub, joshua tree wldd, below 3,000 ft. April-May	Moderate

Table 4.5-1

SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING
IN THE GENERAL PLAN AREA - INDIO, CA.

Species	Common Name	Status	Life Form	Habitat	Probability of Occurrence
SCROPHULARIACEAE <i>Antirrhinum cyathiferum</i> ⁶	Deep Canyon Snapdragon	State:none Fed:none CNPS:2	perennial herb	sonoran desert scrub, riparian scrub	Low
STERCULIACEAE <i>Ayenia compacta</i> ^{3,6}	Ayenia	State:none Fed:none CNPS:2	slender-stemmed perennial shrub	dry rocky cyns, creosote scrub, below 1,500 ft, March-April.	High

CODES

State

none = State status not determined

Federal

C1 = Enough data is on file to support federal listing.

C1* = Enough data is on file to support federal listing, but plant is presumed extinct.

C2 = Threat and/or distribution data are insufficient to support listing.

C3 = Too widespread and/or not threatened.

CNPS

1B = Plants rare, threatened, or endangered in California and elsewhere.

2 = Plants rare, threatened, or endangered in California, but more common elsewhere.

3 = Plants about which more information is needed. A review plant list.

4 = Plants of limited distribution. A watch plant list.

Reference Codes

1 = City of La Quinta General Plan, 1985.

3 = Coachella Valley Master Environmental Assessment, 1979. Prepared by Comarc. Design Systems and Elsner-Smith Planners. Submitted to the Coachella Valley Association of Governments.

4 = County of Riverside General Plan, 1979.

5 = Biological Analysis and Impact Assessment of the Coachella Valley Enterprise Zone, 1990. Prepared by James W. Cornett Ecological Consultants. Prepared for Cotton/Beland/Associates, Inc. (CBA).

6 = California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, 1988.

7 = California Natural Diversity Database: (CNDDB)

cyns = canyons

wldd = woodland

The following species are known to occur in areas adjacent to the General Plan Area but are expected to have little to no potential to occur:

ASTERACEAE

Chaenactis parishii: Parish's Chaenactis - elevation exceeds that of General Plan area

CACTACEAE

Coryphantha vivipara var. *alversonii*: Foxtail Cactus - elevation exceeds that of General Plan area

LAMIACEAE

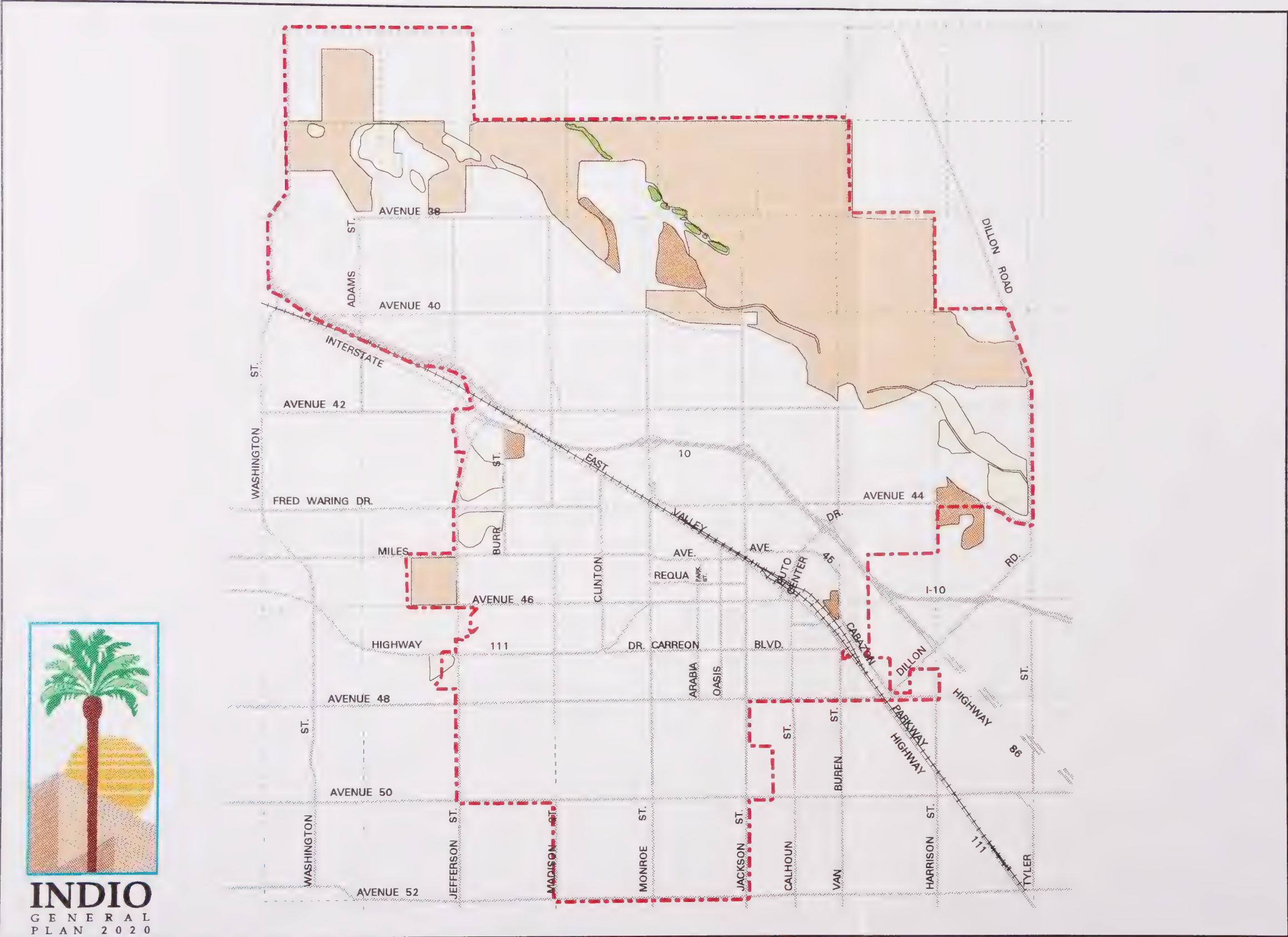
Monardella robinsonii: Robinson's monardella - habitat does not occur in General Plan area

SAXIFRAGACEAE

Heuchera hirsutissima: Shaggy-haired Alumroot - elevation exceeds that of General Plan area

SCROPHULARIACEAE

Penstemon californicus: California Penstemon - elevation exceeds that of General Plan area




INDIO
GENERAL
PLAN 2020

Communities

- Sonoran Desert Scrub
- Chenopod Scrub
- Stabilized Dunes
- Desert Fan Palm Oasis

Figure 4.5-1
VEGETATION COMMUNITIES


Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

Desert fan palm oasis woodlands arise in areas with permanent water or where water tables are close to the surface. Within the Planning Area, this community is scattered in the drainages along the base of the Indio Hills, where the San Andreas fault system, which runs parallel to the foothills, has impeded the flow of groundwater. The dominant species in this community is the fan palm (*Washingtonia filifera*) with associated species that can include mesquite, tamarisk, sycamore, willows, and an understory of shrubs and grasses.

Sensitive Plant Species

Due to the nature of the reconnaissance survey, surveys were not conducted specifically for sensitive species. Rather, areas were noted that had potential to contain sensitive species, given the plant communities present and the level of disturbance in each area. This information was used in conjunction with the sensitive species list compiled from stated sources and are the basis for the conclusions in the following discussion. Figure 4.5-2 shows the areas considered to have high, moderate, or low sensitivity with regard to plants.

Sonoran Desert Scrub Communities

The Sonoran scrub community has potential to contain numerous sensitive plant species. The sandy flats spanning the northwestern corner, sandy areas along the northern side of the pipeline, and the area on the southern side of the Coachella Levee all contain Sonoran scrub with relatively low levels of disturbance. These areas have high potential for the occurrence of glandular and California ditaxis (*Ditaxis adenophora* and *D. californica*), Utah Cynanchum (*Cynanchum utahense*), ribbed cryptantha (*Cryptantha costata*), the Arizona and flat-seeded spurge (*Chamaesyce arizonica* and *C. platysperma*), the salton and Coachella Valley milk vetch (*Astragalus crotalariae* and *A. lentiginosus* var. *coachellae*), Cove's cassia (*Cassia covesii*), desert unicorn plant (*Proboscidea althaeifolia*), the Little San Bernardino Mountain gilia (*Gilia maculata*), and the Deep Canyon snapdragon (*Antirrhinum cyanthiferum*). Sonoran desert scrub also occurs on the south central perimeter of the Planning Area, but this section is highly disturbed and potential for occurrence of sensitive species is estimated to be low.

The Indio Hills and the unnamed hills located in the eastern portion of the Planning Area, south of the Coachella Levee, also contain Sonoran desert scrub. Both areas have low to moderate levels of disturbance, so the potential for sensitive species occurring is high. These species include desert sage (*Salvia eremostachya*), both the Mecca aster and Orcutt's woody aster (*Marchaerantha cognata* and *M. orcuttii*), Arizona spurge, California ditaxis, and the triple-ribbed milk vetch (*Astragalus tricarnatus*).

Dry, sparsely vegetated, sandstone canyons occur within the Indio Hills. These areas exhibit moderate to high levels of disturbance from off-road vehicles, camping, and trash dumping. Moderate to low potential exists for the occurrence of the Las Aminas columbrina (*Columbrina californica*) and the ayenia (*Ayenia compacta*).

INDIO FACTS:

***Largest native
habitat in Indio is
Sonoran desert
scrub; the most
sensitive are
stabilized dunes and
desert fan palm
oasis woodlands.***

In the northeast corner of the Planning Area, on the northern side of the Indio Hills, sonoran desert scrub exists in rocky alluvial soil. Although in close proximity to a small community of houses, trailers, and mining operation, this area displays a low level of disturbance. Sensitive plant species associated with Sonoran desert scrub have high potential to occur in this area, particularly the ribbed cryptantha, California ditaxis, and the desert sage.

Chenopod Scrub Communities

Chenopod scrub occurs mainly in the north-central and eastern portions of the Planning Area, on both the north and south sides of the Coachella Levee, and both areas display low to moderate levels of disturbance. Other small areas of chenopod scrub are found in the west-central area and southeastern area but are in close proximity to urban development

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and were found to be weedy and highly disturbed. The literature search indicated no sensitive plant species limited to chenopod scrub habitat having potential to occur in the Planning Area.

Stabilized or Partially Stabilized Dune Communities

Stabilized dunes occur in the northwest, northeast, southwest, and the southernmost portions of the region. Those located in the northeast are comprised of loose sand, moderately vegetated by mesquite. Overall disturbance appears low, and the area has high potential for dune species including the Salton milk vetch and the Coachella Valley milk vetch. The remaining dunes in the northwest, west-central, and southern regions are vegetated with species including mesquite, creosote bush, various *Atriplex* species, tamarisk, and bunchgrasses. Due to the moderate to high levels of disturbance, potential for the occurrence of sensitive species is moderate. However, stabilized and partially stabilized dunes are considered fragile and sensitive communities in general.

Desert Fan Palm Oases

Desert fan palm oases are observed scattered along the base of the south side of the Indio Hills. While no specific sensitive plant species are indicated by the literature search as occurring in this community, the community type itself is considered rare for this region and is listed as a significant community by the CNDDB.

4.5.2 Wildlife

Methodology

A vehicular and pedestrian survey of the study area was conducted on June 18, 1992, by a wildlife biologist from Chambers Group, Inc. Prior to conducting the survey, the CNDDB was accessed to determine the locality records of all sensitive wildlife species in the study area or its vicinity. Additional documents examined for information on wildlife resources include the City of La Quinta General Plan (1988), Draft EIR for the Monroe Street and Avenue 42 Development (1991), Sun City Palm

Springs Draft Specific Plan (1991), Coachella Valley Master EA (1979), and the County of Riverside General Plan (1989). Based on the species known to occur or with some potential of occurring in the study area, a list was compiled and is presented in Table 4.5-1.

The survey consisted of a visual inspection of all accessible portions of the study area. The survey emphasized those areas with the greatest likelihood of supporting sensitive wildlife species, such as native vegetation; dune systems; natural/seminatural drainages, cliff faces, and escarpments; and surface water sources. The scope of the study prohibited the biologist from determining presence/absence of specific sensitive wildlife; rather, the biologist evaluated the potential of specific areas to support sensitive wildlife.

Regional Characteristics

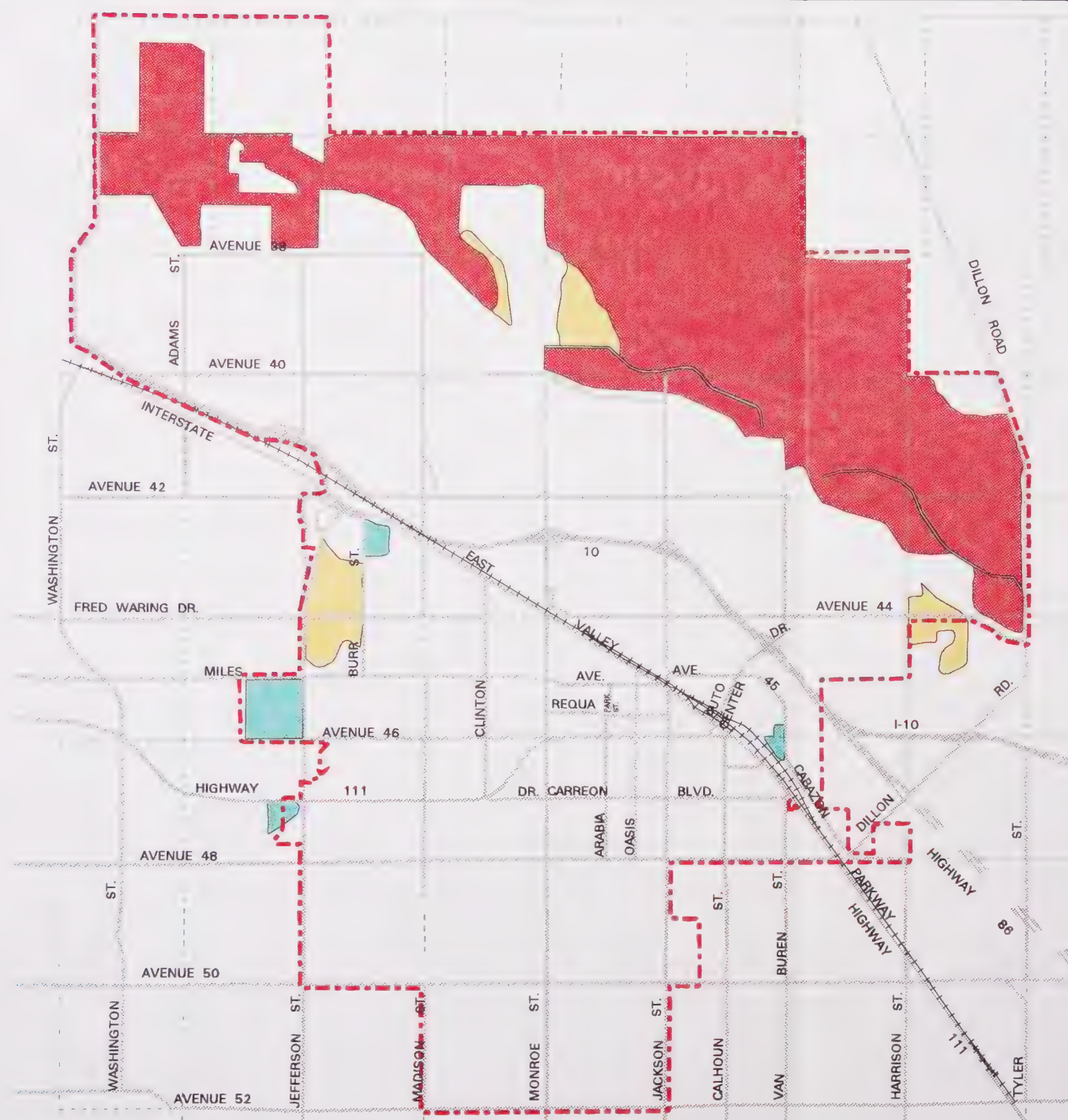
Figure 4.5-3 depicts those portions of the project area with the moderate to high potential of supporting wildlife, including sensitive wildlife species. Most of this habitat occurs in the northern portion of the study area, which is dominated by the Indio Hills. Additional habitat occurs in the northeastern and western portions of the study area. Numerous smaller parcels of land lie among agricultural lands and developments; however, these areas are extensively disturbed and isolated, and are most likely used by domestic pets and by those species of wildlife that are tolerant or attracted to areas of human disturbance, such as coyote and raven. Therefore, in general, these smaller areas are of limited value to wildlife.

Several flood control drainages are in the study area. Although highly modified in nature with little natural vegetation, these drainages are probably acting as movement corridors for more mobile wildlife species, such as coyote and fox, as individual animals move between foraging sites. These foraging sites would include the smaller disturbed areas discussed above.

The numerous tamarisk windbreaks that are associated with fallow or currently active agricultural lands have some resource value to resident wildlife, particularly for bird species. Raptors have been observed roosting in these trees, and there is potential for nesting as well.



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Sensitivity

- Low Potential
- Moderate Potential
- High Potential

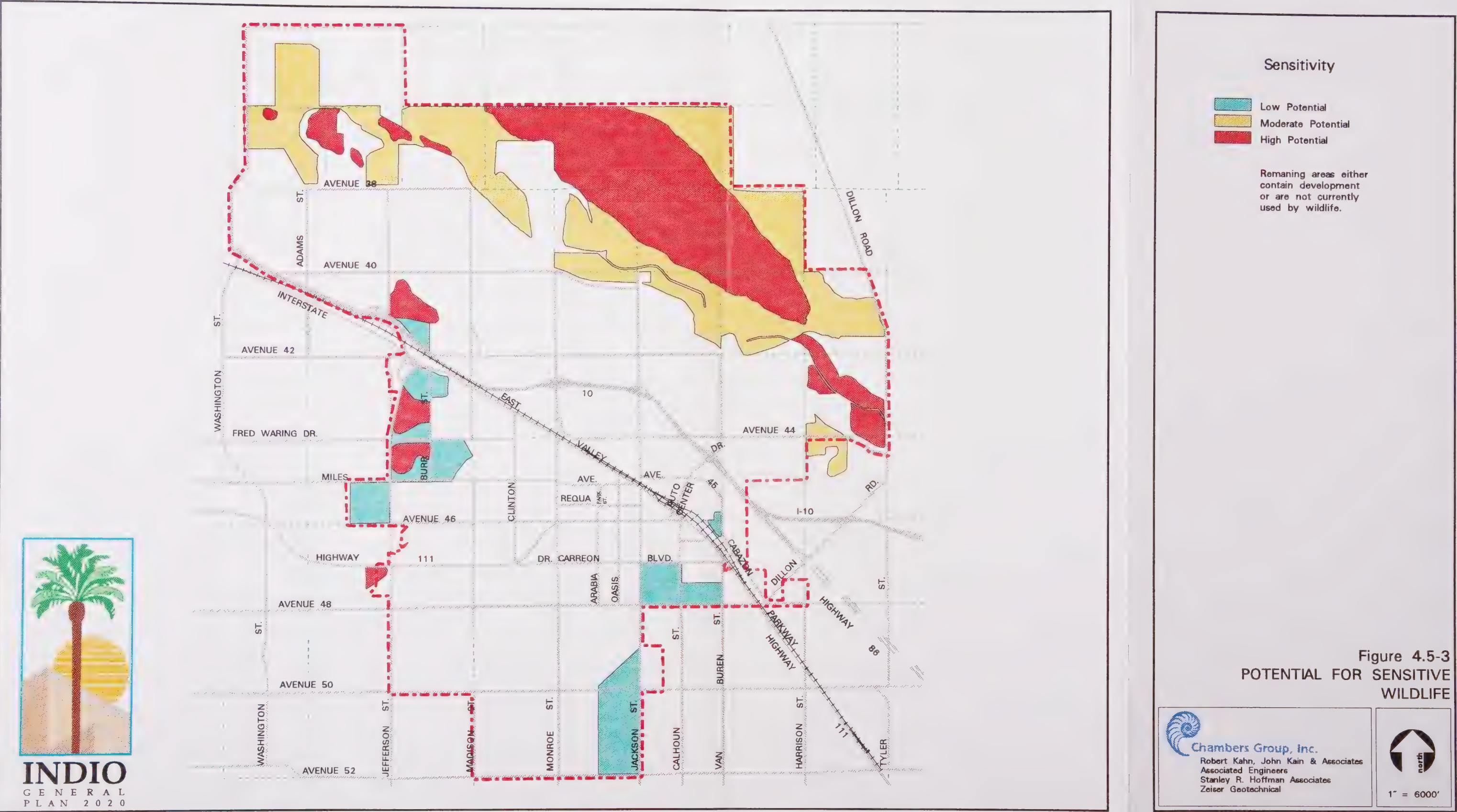
Figure 4.5-2
POTENTIAL FOR SENSITIVE
PLANT SPECIES



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'



The desert fan palm oases located in the southern slopes of the Indio Hills are an important resources for resident and migratory wildlife. These habitats offer locally dense vegetation as cover and nesting sites, as well as a reliable freshwater source. Some of these oases have been developed, reducing their value to wildlife.

The Indio Hills comprise the single largest continuous portion of the study area for wildlife. Although the slopes consist of low density creosote bush scrub compared to undisturbed areas in the surrounding lowlands, the numerous canyons and upper bajada areas support important habitats for wildlife. These habitats offer shelter and more dense and diverse vegetation. These habitats are largely undisturbed by human activity due to the ruggedness of the terrain in the region, with the exception of the habitat along the base of the hills, where locally intense disturbance has occurred. This disturbance consists primarily of off-highway vehicle use, recreational shooting, and illegal refuse dumping.

Sensitive Wildlife Species

Table 4.5-2 is a list of sensitive wildlife with some potential for occurrence in the study area. This table is based on the known ranges of sensitive species and the habitat types and conditions present in the study area. The regions of the study area most likely to support sensitive wildlife are depicted on Figure 4.5-3. These sensitive wildlife species are discussed on a habitat-by-habitat basis below.

Sonoran Desert Scrub

Two species of sensitive wildlife have the potential of occurring in this habitat. A small population of desert tortoise (*Gopherus agassizii*) is known to occur to the west of Washington Street, which lies along the northwest border of the Planning Area. There is moderate potential for the species to occur in the vicinity of the Indio Hills south to the existing levee in the northern portion of the study area. The chuckwalla (*Sauromalus obesus*) is a large bodied lizard that inhabits boulders and rock outcrops in the desert scrub. It has a high probability of occurring in the Indio Hills region of the study area.

The Palm Springs ground squirrel (*Spermophilus tereticaudus chlorus*) was observed in the vicinity of the study area in 1938. Although there are no additional records in the CNDDb, it is assumed to be extant. This species is known to inhabit desert wash and levees in desert scrub. If the species is still present in the Coachella Valley, there is a moderate to high potential for its occurrence on the northern portion of the study area.

Several species of sensitive birds may occur in the desert scrub and associated wash habitats of the study area. The Le Conte's thrasher (*Toxostoma lecontei*) occurs in open desert washes and succulent desert scrub. There are several records of this species in the vicinity of Indio. There is a high probability that it occurs in the less disturbed northern portion of the study area and in the vicinity of Indio Hills. The Crissal thrasher (*Toxostoma dorsale*) prefers more dense vegetation along the streams and wooded washes, and mesquite and ironwood stands. Although very little dense wash vegetation exists in the study area, there are some locally thick stands of mesquite. There are several records of this species in the vicinity of Indian Wells, Thermal, and Indio. Because the Crissal thrasher is more of a wash vegetation specialist, there is a low probability of its occurrence in the study area. The black-tailed gnatcatcher (*Poliophtia melanura*) prefers wooded desert washes and desert scrub. This species was seen in 1984 approximately 1 mile southwest of the study area. There is a high potential for the species occurring in the natural and seminatural drainages and open scrub habitat in the study area. The vermilion flycatcher (*Pyrocephalus rubinus*) is a migratory bird that has been observed in the riparian habitat associated with irrigation fields, ditches, and pastures in the Coachella Valley. Although there are few recent recorded sightings of this species, there is a high to moderate probability of the vermilion flycatcher occurring occasionally in the study area. The prairie falcon (*Falco mexicanus*) has been recently sighted in the vicinity of the study area. This far-ranging species nests in cliffs and forages in open habitat. There is a high probability of the species occurring in the study area.

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Table 4.5-2

SENSITIVE WILDLIFE SPECIES KNOWN TO OCCUR OR
POTENTIALLY OCCURRING IN THE STUDY AREA

Common/Species Name	Federal Status	State Status	Other	Habitat Association
Coachella giant sand treader cricket <i>Macrobaenetes valgum</i>	C2	---	---	Windswept sand dune ridges
Coachella Valley Fringe-toed lizard <i>Uma inornata</i>	FT	SE	---	Blowsand deposits, including dunes and hummocks
Chuckwalla <i>Sauromalus obesus</i>	C2	---	---	Rock outcrops and boulders in creosote desert scrub
Flat-tailed horned lizard <i>Phrynosoma mcallii</i>	C1	---	CSC	Loose sandy soils, blowsand deposits
Le Conte's thrasher <i>Toxostoma lecontei</i>	---	---	CSC	Open desert wash, desert scrub, succulent desert scrub
Crissal thrasher <i>Toxostoma dorsale</i>	---	---	CSC	Dense wash vegetation, mesquite and ironwood stands
Vermilion flycatcher <i>Pyrocephalus rubinus</i>	---	---	CSC	Nests in desert riparian along, irrigation ditches, fields
Prairie falcon <i>Falco mexicanus</i>	---	---	CSC	Nests in cliffs; forages widely in open terrain
Palm Springs ground squirrel <i>Spermophilus tereticaudus chlorus</i>	C2	---	---	Desert wash and scrub; levees

Federal

- C1** = Category 1 candidates are "taxa for which the Service currently has on file substantial information on biological vulnerability (relating to autecology and distribution) and threat(s) to support the appropriateness of proposing to list the taxa as endangered or threatened species."
- C2** = Category 2 candidates are "taxa for which information now in the possession of the Service indicates that proposing to list them as endangered or threatened species is possibly appropriate, but for which substantial data on biological vulnerability and threat(s) are not currently known or on file to support the immediate preparation of rules."
- FT** = Species designated as threatened under the Federal Endangered Species Act.

State**SE** = Endangered**CSC** = California Department of Fish and Game Species of Special Concern

Stabilized or Partially Stabilized Dune Systems and Blowsand Areas

Several species of vertebrates and invertebrate are known to occur in the vicinity of the study area. The Coachella Valley fringe-toed lizard (*Uma inornata*) is found as scattered populations on blowsand deposits throughout the Coachella Valley. This species is known to occur on several dune systems in the study area. These systems are primarily found in the northwestern and northeastern portions of the study area. There is a high potential for its occurrence elsewhere in the study area, where loose blowsands are found. The flat-tailed horned lizard (*Phrynosoma mcallii*), like the fringe-toed lizard, is typically found in loose sand deposits in the Coachella Valley. It has a high potential for occurrence in the blowsand deposits in the study area.

Regarding invertebrates, the Coachella giant sand treader cricket (*Macrobaenetes valgum*) is a blowsand specialist in the Coachella Valley. There is a high potential for the species occurring in blowsand deposits in the study area.

4.6 ENERGY CONSERVATION

Measures that result in the conservation of energy can be divided into three major categories:

1. incorporation of energy-conserving feature in new construction,
2. installation of energy-conserving features into existing structures, and
3. residents practicing energy-conserving measures.

Most features that can be installed into new construction can also be installed in existing units.

A variety of programs is available to builders and property owners dealing with energy conservation. Discussion on consumption of gasoline, electricity, and natural gas as well as water conservation can be found in the appropriate sections of Public Services, Section 3.3.

Title 24 of the State Building Code deals directly with energy conservation and is continuously updated and revised to require greater energy efficiency in the construction of new housing. In addition, state laws have provided alternatives to satisfying energy efficiency requirements including passive and active solar designs, insulation standards, limitations on glazed window areas, and more efficient heating and cooling mechanical devices.

Energy conservation can increase through increased efforts to retrofit existing homes as well, and several existing programs address this issue. Riverside County's Community Action Agency administers the most widespread weatherization and energy conservation program. This state-funded program provides repairs to help low-income families and individuals, including senior citizens and persons with disabilities, add or modify features in their homes that can make significant savings in their monthly utility bills. These repairs, offered at no charge, include such things as insulation of hot water pipes and water heaters, window repairs, weather stripping or caulking, and installation of low-flow devices to sinks and showers (CVAG 1989).

The SCG offers a similar program called the Low-Income Weatherization Program, which offers repairs

(see above) at no cost to qualified families. Also offered by SCG is an Appliance Repair and Replacement Program for qualified home owners and a rebate program for all SCG customers. Through the rebate program, customers are partially reimbursed for purchasing efficient gas furnaces or installing different weatherization devices. These rebates occur on a first come, first serve basis while funds are available (SCG 1992).

SCE offers the Energy Management Hardware Rebate program to its customers. SCG will reimburse residential electricity users for incorporating conservation measures such as indoor lighting system replacement and other lighting modifications. A survey by an Energy Services representative is required.

**INDIO
FACTS:** *Indio is an excellent
candidate for solar
energy production.*

4.6.1 Alternative Energy Sources

The Riverside County General Plan outlines land use standards for solar and wind resources. Indio has a considerable potential for use of solar power given its high incidence of sun exposure. Solar uses for water and space heating are encouraged where feasible in all types of development. Standards for location, construction, and visual impact of wind energy development are outlined as well. However, Indio does not fall within the primary wind energy area as outlined in the Riverside County General Plan so the development of wind energy is not feasible.

4.7 MINERAL RESOURCES

Minerals are naturally occurring elements in the earth. Although most minerals are inorganic in composition, some, such as coal and amber, are organic. Minerals are important naturally occurring resources that have great importance to the economy and existence of the nation. At times, especially in urbanizing areas, conflicts arise between urban land uses and mineral extraction. Because most land uses have the option of where they are sited, mineral resource extraction is limited to areas in which they occur. The State of California has recognized the importance of managing and protecting mineral resources from urban intrusion so that mineral resources such as aggregate (sand and gravel) for cement production will not have to be imported from long distances. Hauling aggregate over long distances to high consumption areas, such as southern California, adds to the increased cost of housing, transportation, and energy.

The California Department of Conservation, Division of Mines and Geology has published reports that designate areas of aggregate resource and the expected needs by regions for such resources over the next 50 years. In any urban development it is important that land-use decisions be made keeping in mind the importance of aggregate resources occurring in the area. Because more areas are becoming urbanized, suitable sand and gravel deposits are being lost through urban development and are diminished yearly by mining.

In an effort to protect mineral deposits, the State of California Legislature, through the passage of the Surface Mining and Reclamation Act (SMARA) in 1975, requires the State Geologist to do research and prepare reports that designate mineral deposits of state-wide and regional significance in areas called production-consumption (P-C) regions.

Mineral Resource Zones (MRZ) are established on the basis of a sand and gravel and stone resource appraisal that include a study of geologic maps and reports, field investigations of outcrops and active and inactive mining pits, and an analysis of water-well logs and drilling records.

The State classifies lands containing significant sand and gravel deposits not taking into account current land uses. Its classification scheme is as follows:

- ▶ **MRZ-1:** Areas within the P-C region where adequate information indicates no significant aggregate deposits are present.
- ▶ **MRZ-2:** Areas where adequate information indicates that significant aggregate deposits are present. These areas are generally broken into sectors to identify those area that have not been urbanized.
- ▶ **MRZ-3:** Areas that contain aggregate deposits, the significance of which cannot be evaluated from available data.
- ▶ **MRZ-4:** Areas where it is not possible to determine whether the land should be assigned the above three classifications.

A study of the Palm Springs P-C Region conducted by the California Division of Mines and Geology in 1988 concluded that the entire region within the current city limits of Indio and the Indio Ranchos Annexation areas have no significant aggregate deposits or little likelihood exists in these areas for their presence (refer to Figure 4.7-1). This study also concluded that significant deposits of aggregate materials may exist within the region southwest of the base of the Indio Hills and northeast of the Coachella Levee. However, the existing data were inadequate to make accurate predictions on their presence.

**INDIO
FACTS:** *The 754-acre
Granite
Construction Mine
located in the
Planning Area is the
largest producer of
aggregate in the
Coachella Valley.*

This same study classified an area of the alluvial fan on the southwestern flank of the Indio Hills area as containing significant aggregate mineral deposits.

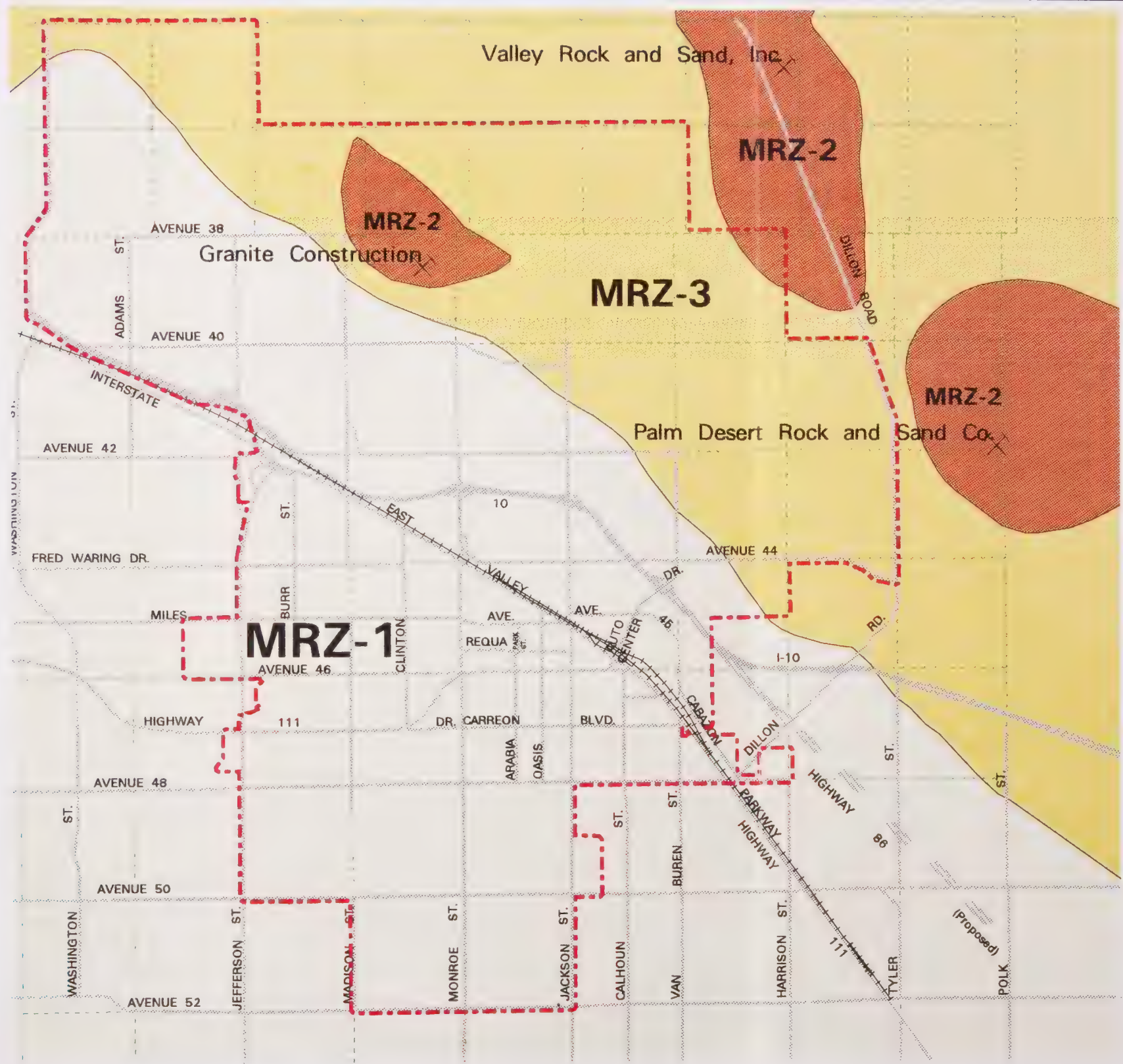
About half of the 754-acre area is currently under permit and controlled by Granite Construction. This site has been mined for more than 42 years and

ENVIRONMENTAL RESOURCES

currently has County permits to continue mining operations until 2013. This quarry is the largest producer of aggregate material in the Palm Springs P-C Region. In 1988, it was calculated that the area contains approximately 73 million tons of Portland cement concrete (PCC) grade aggregate resources to a depth of 60 feet. The source of this material is more than likely the Little San Bernardino Mountains to the north. Materials were deposited in an alluvial fan in the area known as the Indio Hills and subsequently uplifted and eroded.

Two other areas that have been designated by the State as having significant aggregate resources are located in close proximity to the Planning Area and to the northeast and southeast of the present Granite Construction operation. As indicated on Figure 4.7-1, the area in which the Palm Desert Rock and Sand Company is located encompasses approximately 3,295 acres of a large alluvial fan at the mouth of Fargo Canyon on the east side of Dillon Road. The 5-square-mile area contains approximately 191 million tons of PCC grade aggregate to a depth of 25 feet. Depth of the resource is an estimate based on current operations at Palm Desert Rock and Sand Company's quarry. The current quarry has been in operation since 1983 on a 40-acre lease.

Valley and Rock Sand, Inc., is operating a quarry on an alluvial fan at the mouths of the West Berdoo and Berdoo Canyons between the Little San Bernardino Mountains and the Indio Hills. The area encompasses approximately 2,698 acres east and west of Dillon Road and is calculated to contain approximately 174 million tons of aggregate to a depth of 25 feet. Valley Rock and Sand, Inc., has been in operation since 1985. The operators have all of Section 29 under lease and have a permit to mine on 38 acres in the southwestern portion of that section.



Mineral Resources


- MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence
- MRZ-2 Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence
- MRZ-3 Areas containing mineral deposits the significance of which cannot be evaluated from available data

Source: Mineral Land Classification Map - Aggregate Resources only
Palm Springs P-C Region,
Russel V. Miller, 1987

Figure 4.7-1
MINERAL RESOURCE ZONES



INDIO
GENERAL
PLAN 2020

 **Chambers Group, Inc.**
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

4.8 CULTURAL RESOURCES

This section provides background information, a description of recorded sites and potential site locations, and sensitivity maps for prehistoric, ethnohistoric, and historic cultural resources.

Prehistoric sites or resources are defined as those occupied prior to the arrival of European settlers (pre-1760). Ethnohistoric sites are those dating to the period between 1760 and 1870, a period marked by contact between European settlers and the Cahuilla Indians prior to the actual settlement of the town of Indio. Historic resources refer to those that date to the American period of settlement beginning with the construction of the railroad through the Coachella Valley in the early 1870s and continuing on through the 1940s. Historic sites, which are less than 45 years old, are generally not considered historic resources.

4.8.1 Prehistoric and Ethnohistoric Cultural Resources

The following sections on the environment and prehistory rely heavily on Dominici (1987) with additional information taken from Graham (1982), Rosen (1982), and Schaefer (1986).

Environment

Physiography, Geology, and Hydrology

The study area is centered in the town of Indio in the Coachella Valley. It is roughly bordered by the Indio Hills to the north, Washington Street to the northwest, Jefferson Street and the +40-foot elevation contour line to the west, 50th Avenue to the south, and Dillon Road, the Cabezon Indian Reservation, and Jackson Street to the east. Elevations range between about 50 feet below sea level to the east to a maximum of 1,035 feet in the Indio Hills to the north. All of the area below the +42-foot contour line was once covered by the fresh water of prehistoric Lake Cahuilla.

Physiographically, the study area is located in the Colorado Desert in the west-central portion of what is known as the Salton Trough, a large below-sea level depression bounded by the Peninsular Ranges

on the west (including the nearby Santa Rosa Mountains), an area of higher elevation just north of the Gulf of California to the south, the Mojave Desert to the north, the Little San Bernardino Mountains and Indio Hills to the east, and the Orocopia, Chocolate, and Cargo Muchacho Mountains to the east and southeast.

The three major physiographic features situated within the study are (1) the playa left behind by the receding levels of prehistoric Lake Cahuilla, (2) the Myoma Dunes (currently known as the "Bermuda Dunes," and (3) the Indio Hills. The Myoma Sand Dunes were created from sands derived from the Whitewater River drainage that used to flow from west to east through the town of Indio, then headed abruptly southeast toward Thermal (cf. USGS 30-minute Indio quadrangle of 1901). Later during the late teens and twenties, the river was diverted to swing north of the town (cf. 1941 USGS 15-minute Coachella quadrangle 1941). The Myoma Dunes once bordered the shoreline of prehistoric Lake Cahuilla at its highest stand and were favorite locations for prehistoric Cahuilla settlement (see below). Their mass and height are attributed to the presence of stands of mesquite:

Mounded dunes lacking slip faces apparently were formed by deposition among mesquite (*Propopis glandulosa*) thickets that grew in response to the high water table during the recent stands of Lake Cahuilla. The mesquite continued to crown out of the tops of the dunes as they gradually rose to heights of up to 35 or 40 feet. Many of the mesquite thickets that crown these dunes have ring-shaped patterns many yards across. They are probably clones, arisen from a single plant, and if so, are not less than 500 years old. There are also interdune basins with elevations of less than +42 feet, the level of the last stand of Lake Cahuilla. (Wilke 1978:63; see also Van Horn 1990:3)

The Myoma Dunes are situated in the northern and western portions of the study area.

The Indio hills are located in the northernmost portion of the study area and consist of an northwest-southeast trending set of low hills reaching a maximum elevation of 1,035 feet. These hills consist of Tertiary and Quaternary bedrock units

ENVIRONMENTAL RESOURCES

uplifted by movement along the San Andreas Fault. This fault zone is at the base of, and parallels, the Indio Hills. The Tertiary bedrock units included within the Indio Hills include the Mecca, Palm Springs, and Canebrake formations; the Quaternary bedrock unit is the Ocotillo Conglomerate.

The Mecca Formation consists of alternating layers of massive, poorly sorted conglomerate and pebbly arkose sandstone; it outcrops along the southeastern portions of the Indio Hills. The Palm Springs/ Canebrake Formation lies atop the Mecca Formation and consists of alternating layers of yellowish to gray conglomerates and tan to reddish-gray, well-bedded arkosic sandstones; it outcrops along the southwestern portion of the hills. Finally, the Ocotillo Conglomerate, composed of alternating beds of semiconsolidated sandstone and grayish semiconsolidated gravel and boulder conglomerate, outcrops along the northern portion of the hills.

In general, the geological formations within the Indio Hills would not have been good sources of raw materials for the production of flaked stone tools by the areas prehistoric Native American inhabitants. However, they contain a number of palm oases that were important settlement locations for the prehistoric Cahuilla, although all of the major ones are located outside the study area. In addition, it is likely that the San Andreas fault zone beneath the hills has been associated with springs that were periodically opened and sealed by movement along the fault. Such springs may have been the locus of prehistoric activity in the past.

To the north of the Indio Hills and a narrow valley running along them are the Little San Bernardino Mountains. These mountains are well outside the study area.

The City of Indio itself is situated on both sides of the old Whitewater River channel as it flowed east into the playa of prehistoric Lake Cahuilla. Most of the central, eastern, and southern portions of the study area are located below sea level within this old playa.

Climate and Hydrology

The local climate is very dry with some years producing no measurable rainfall. However, heavy rains within the upper Gila and Colorado River

drainages have caused the latter to break its natural levees further west resulting in heavy flooding of the Salton Trough. Such discharges were reported in 1840, 1842, 1859, 1862, 1867, and 1891 during the 19th century (Waters 1980:20, 62 as cited in Dominici 1987:11). Work on a manmade canal system near the Mexican border led to accidental flooding of the Colorado River between 1905-1907 resulting in the creation of the Salton Sea.

Blake (in Williamson 1853) noted ancient shorelines that attest to prehistoric flooding episodes during both the Pleistocene and Holocene. The last major series of such flooding began about 950 years ago (ca. A.D. 1050) and continued periodically for the next 450 years. Each lacustral interval saw the Colorado River flood into the Imperial and Coachella Valleys, creating a lake about 315 feet deep. A rich lacustrine environment thus developed along a shoreline situated at about 42 feet above sea level, the point at which the lake overflowed across the Colorado's deltaic cone into the Gulf of California (Dominici 1987:12). Prehistoric Native American populations were attracted from the surrounding regions to this shoreline so favorable for human habitation.

A number of authors have discussed the question of the frequency and longevity of prehistoric Lake Cahuilla (Sieh 1981; Waters 1980, 1983; Weide 1976:9-20; Wilke 1978; cf. Dominici 1987:12). During the Pleistocene, six stands of what is known as Lake Le Conte or the Blake Sea are known between 50,000 and 26,000 B.P. The Pleistocene shorelines were located above 100 feet above mean sea level. No known human occupations are associated with these Pleistocene period lakes. Four, possibly five, lake stands occurred during the Holocene.

According to Dominici (1987:12-13):

A recent evaluation of calibrated radiocarbon dates by Waters (1983) confirms four major intervals beginning at A.D. 700. This revised chronology is based on paired *Anondonta dejecta* shells from lacustrine deposits and charcoal from archaeological hearths interstratified between lacustrine strata. Most significant . . . is a final date for a lacustral interval that is 40 years later than [sic] the date established by Wilke (1978). The

fourth infilling is estimated to have begun at A.D. 1430 with the Colorado returning to the Gulf in A.D. 1540, with an estimated 50-year recessional phase. The fourth recession would have terminated by A.D. 1580.

A fifth lacustral phase has also been recently suggested (Sieh 1981; Schaefer 1986). Given the date ranges of radiocarbon samples at sites below the 40-foot above mean sea level contour, serious consideration should be given to this possibility. Although historical sources do not generally confirm a fifth interval (Wilke 1978:50-53), it is possible that a partial, short-term infilling occurred between European expeditions to the area. Evidence may be finally accumulating to support the John Rocque map of approximately A.D. 1762 that clearly depicts Lake Cahuilla (Wilke 1978:53).

An interesting question revolves around the changing environmental conditions during the recession of the shoreline at the termination of a given lacustral phase. Wilke (1978) assumed that rapid evaporation led to the equally rapid recession of the shoreline marshes and shallow bays, resulting in the rapid demise of the populations living along the shoreline at the 40+ contour level. Wilke (1978:58) and Hely et al. 1986:1 estimate that it would take 55 to 60 years for a return to desert conditions (cf. Dominici 1987:13).

Dominici (1987:13) continues:

... Shellfish would still be exploitable until the shoreline receded to 20 feet below mean sea level, but increasing salinity would eventually destroy them (Bowersox 1973). Bonytail chub and humpback sucker would have been available to at least 95 feet below mean sea level (Wilke 1978:110), as demonstrated by fish remains in aboriginal sites at 110 feet below mean sea level (Phillips 1982). Eventually the waters would have become too saline for even these species and soon the lake bottom would be transformed to a marginal creosote-bursage scrub desert environment.

Populations that once inhabited the area would have retreated to the Colorado River valley and delta, the Whitewater River valley, or to the Peninsular Range, with the study area being used only for seasonal habitation along the Whitewater River and in areas where shallow wells could be excavated (Dominici 1987:13).

Prehistoric Biota

Wilke (1978) documented the natural resources exploited by prehistoric Native American populations through a study of pollen, plant macrofossil, and vertebrate and invertebrate faunal remains left at their habitation sites along the north shore of Lake Cahuilla. Freshwater marshland resources of importance to the Cahuilla include tule (*Scirpius* sp.), cattail (*Typha* sp.), and reeds plus a number of grasses (e.g., *Phragmites australis*) (Dominici 1987:12). Wilke (1978) thinks the marshy areas may have been up to a mile wide in places, and McWilliams (1970:3) suggests that some of the dunes or localized knolls may have been islets (cf. Van Horn 1990:7).

Mesquite-covered dunes or hummocks paralleled the shoreline, many of which still exist today, especially along the western and northwestern portions of the study area. Western honey mesquite (*Prosopis glandulosa*) was not only an important food source (beans), but it was also useful for its wood, associated insects, and as a location of small game (Dominici 1987:12). According to Foulkes (1985:21 as cited in Van Horn 1990:8), the Cahuilla and early pioneers ground the dry, sweet mesquite pods or beans into flour. Screwbean (*Prosopis pubescens*) was also an important food source (Van Horn 1990:7).

The aquatic environment of prehistoric Lake Cahuilla also supported a number of freshwater fish that were important to the Cahuilla: Colorado River bonytail chub (*Gila elegans*), the humpback sucker (*Xyraychen texanus*), Colorado River squawfish (*Ptychocheilus lucius*), desert pupfish (*Cyprinodon macularius* c.), and striped mullet (*Mugil cephalus*). Shellfish (mussels) were also important to the diet (*Anodonta dejecta*) (Dominici 1987:12; Van Horn 1990:7).

According to Wilke (1978), large numbers of avian and terrestrial fauna would have been attracted to

the marsh and freshwater lake environment of prehistoric Lake Cahuilla. Today, the Salton Sea attracts great numbers of geese, shorebirds, ducks, swans, pelicans, waders, herons, and cormorants (Dominici 1987:12). Desert animals, such as jackrabbits and small rodents, would have been attracted to the shoreline. The restricted seasonal availability of some of the plant foods and aquatic birds consumed by the Cahuilla suggests that the Myoma Dunes were occupied all year round (Wilke 1978:128 as cited in Van Horn et al. 1990:11).

Present Day Biota

The vegetation within the study area falls primarily within two of the botanical zones identified in Wilke (1976): the Creosote bush scrub community situated between 3,500 feet (1,035 feet in the study area) and sea level and the Alkali sink scrub community, situated at sea level and below. For the present analysis, somewhat different terminology is used. The valley portion of the study area is dominated by Chenopod scrub and vegetation associated with stabilized dunes. The upland (northern part of the Planning Area, including the Indio Hills) is dominated by Sonoran desert scrub and scattered desert fan palm oases.

Thorne (1976:23-25) describes the vegetation in the valley area (mostly below sea level) as transitional (cf. Dominici 1987:13). Some of this diversity is the result of both natural and major human transformations of the landscape, such as extensive discing by farmers to remove unwanted "brush" and the construction of levees to reroute and control the CVSWC (ibid.). The survey notes from the Government Land Office (GLO) Plat survey of 1855-56 (Croze) describe thick mesquite stands along the Whitewater River east of Indio; today, they are almost entirely gone (cf. Dominici 1987:13). A combination of development and agriculture has also greatly lowered the water table.

The valley is dominated primarily by the Chenopod scrub community and vegetation associated with stabilized dunes. The dominant species within the Chenopod scrub community include saltbush (*Atriplex lentiformis*), allscale (*Atriplex polycarpa*), mesquite (*Prosopis* sp.), and tamarisk (*Tamarisk ramosissima*). The stabilized dunes contain primarily screwbean mesquite (*Prosopis pubescens*), creosote

bush (*Larrea tridentata*), tamarisk (*Tamarisk ramosissima*), and bunch grasses.

Other vegetation in the valley includes:

cat's claw (*Acacia greggi*), palo verde (*Cercidium floridum*), and smoke tree (*Psoralea spinosus*). . . Common animals present in the region include the black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), pocket mouse (*Perognathus* sp.), desert kangaroo rat (*Dipodomys deserti*), coyote (*Canis latrans*) and kit fox (*Vulpes macrotis*) (Bobbie Steele, Caltrans Graduate Student Assistant-Botanist, personal communication September 1984).

The northern (Indio Hills) portion of the study area is dominated by the Sonoran desert scrub community. Dominant species include creosote bush (*Larrea tridentata*), burr weed (*Ambrosia dumosa*), allscale (*Atriplex polycarpa*), buckwheats (*Eriogonum fasciculatum* and *E. inflatum*), and bunch grasses. The desert fan palm oases parallels them and contain primarily fan palms (*Washingtonia filifera*), screwbean mesquite (*Prosopis pubescens*), and desert holly (*Atriplex hymenolytra*).

According to Van Horn (1990:8-9), the desert environment also included desert mistletoe, which parasitically feeds on mesquite and screwbean and ironwood (*Olneya tesota*). The latter are found primarily in canyons and sandy washes and yield seed pods said to taste like peanuts when roasted (Foulkes 1985:22; cf. Van Horn 1990:8).

Prehistory

As Dominici (1987:14) points out, the reconstruction of prehistoric lifeways of the hunter-gatherer populations of the Colorado Desert has been difficult due to the nature of many desert sites, which are often eroded and deflated lithic assemblages on desert pavements. The major periods of the culture history of the larger study region are based on information provided by Wilke (1976) and Moratto (1984) as summarized in Dominici (1987:14-16). This section relies heavily on that summary.

Period 1, Pre-Projectile Point Cultures: This period, presumed to pre-date 10,000 B.C., is viewed with considerable skepticism today. As Moratto (1984) has noted, most of the data were obtained from questionable contexts and used unreliable dating techniques. Originally the Yuha Burial site in Imperial County was dated to 21,500 B.P. (Childers 1974:2). Childers (1974, 1977) and Bischoff, Childers, and Schlemmer (1978) supported this early date while others such as Payen et al. (1978:453) and Wilke (1978:445-447) disputed its authenticity. Stafford et al. (1984) have recently used accelerator dating techniques to redate the site to 1,650 to 3,850 B.P. More recent work by Taylor et al. (1985), using tandem accelerator mass spectrometry (TAMS), has greatly reduced the number of Pleistocene-age skeletons in the Western Hemisphere as a whole.

Period 2, San Dieguito (ca. 10,000 to 5,000 B.C.): Dominici (1987:15) summarizes this period as follows:

This complex is best known from the C.W. Harris site in San Diego County (Warren and True 1961), but it has been widely reported for the interior desert regions (Warren 1967; Rogers 1936, 1966). The artifact assemblage includes large leaf-shaped knives, points, crescents, several types of scrapers, engraving tools and drills, all of an elementary technological design (Warren and Ranere 1968:73-74; Crabtree 1981:40). The complex is viewed as a regional variant of an early hunting tradition found over a wide area of Southern California (Wallace 1978:27). It is believed this culture spread into California from the east (Wallace 1978:27).

Period 3, Pinto (ca. 5,000 to 1,500 B.C.): This period is best documented from materials found in the Mojave Desert. Subsistence is thought to still be primarily hunting-based. Common artifacts associated with this period include notched and stemmed Pinto points, leaf-shaped points, leaf-shaped knives and drills, heavy keeled scrapers, manos and metates, and a few mortars and pestles.

Bettinger and Taylor (1974:13) have defined two styles and associated geographical distributions of point types: (1) the "Pinto Basin" type, which are usually thick, percussion flaked points found only in

the Colorado and eastern Mojave Deserts; and (2) the "Little Lake" type, which are thin with evidence for extensive pressure flaking, and are found in the Mojave Desert, and from Death Valley north to Owens Valley (cf. Dominici 1987:15).

Period 4, Amargosa (ca. 1,500 B.C. to ca. A.D. 900): This period is not known for the study area or its general vicinity. It has been documented at sites in other areas, such as the Rose Spring site in southern Owens Valley (Lanning 1963) and possibly the Indian Hill Rockshelter (Wilke et al. 1986) situated about 50 miles southwest of the study area. In general, this period reflects the cumulative effects of environmental change (Crabtree 1981:41; Warren 1984) with a greater emphasis on plant foods and smaller game.

The Rose Spring site contains Rose Spring and Eastgate type points, which are thought to reflect the technological shift from the atlatl to the bow and arrow (Crabtree 1981:41). Other artifacts include manos and metates; numerous types of knives, drills, and scrapers; shell and stone beads; and painted and incised pebbles and slate pendants (Dominici 1987:15).

Excavations by Wilke et al. (1986) at the Indian Hill Rockshelter produced Elko Eared points (darts) in the lower levels and a possible Rose Spring (arrow) point in the top of these lower levels (Dominici 1987:16). The Elko Eared assemblage included manos and metates, flaked scrapers, choppers, cobble and core hammers, some obsidian, no ceramics, and *Olivella* shell beads (ibid.). A human burial dated to about 2120 B.C. and was associated with an Elko point. The appearance of ceramics about 1,000 years ago marks the end of the Amargosa Period.

Period 5, Late Prehistoric (ca. A.D. 900 to 1900):

This period marks both continuity and change from the previous period. Burial patterns change from inhumation to cremation, bow and arrow points continue with the appearance of the Cottonwood Triangular and Desert Side-Notched series, floral and faunal resources are equally important in the diet, and the preservation of the archaeological record permits seasonal occupations to be well defined. Certain resources (mesquite, agave, and acorns) are much more intensively used than during earlier periods (Crabtree 1981:45, as cited in Dominici 1987:16).

Ceramics make their appearance at the onset of this period. Wares from the Colorado River were perhaps introduced as early as A.D. 600 (Rogers 1945:185; Harner 1958:94-95) with local ceramics being produced beginning around A.D. 1000 (Schroeder 1961:87 as cited in Dominici 1987:16). The major types found in the study region include Tizon Brown Ware (Euler and Dobyns 1958) and Lower Colorado Buff Ware (Schroeder 1952).

More recent work has focused along the shoreline of ancient Lake Cahuilla (Brooks et al. 1977; Ellis and Crabtree 1974; Weide 1976; Wilke 1978) (cf. Dominici 1987:16). Wilke (1978) and Weide (1976) have presented different ecological models for the interaction between the changing levels of Lake Cahuilla and native Cahuilla responses to it. Dominici (1987:16) has broadly summarized these alternative models as follows:

	<u>Wilke (1978)</u>	<u>Weide (1976)</u>
Lake Level	Stable	Unstable
Population	Large	Small
Occupation	Sedentary	Seasonal
Cultural	Significant	Minor
Consequences	Out-Migration	Readjustments

Dominici (1987:16-17) continues:

Regional Colorado Desert cultural sequences for the Late Prehistoric include those developed by Colton (1945), Gladwin and Gladwin (1934), Harner (1958), Rogers (1945), and Schroeder (1952). Terms for the traditions of this period are varied: Lowland and Upland Payatan, Kakataya, Amacava, Yuman, etc. (Chartkoff and Chartkoff 1984; Cordell 1984; Davis et al. 1980; McGuire and Schiffer 1982; Moratto 1984; Ortiz 1979, 1983; Wilke 1976).

This Lake Cahuilla work, as well as Schiffer's work at Tahquitz Canyon and a number of recent BLM studies, should provide important data that will help to refine regional and supra-regional chronologies.

Ethnography

Sources

The ethnographically known Native Americans living in the northern Coachella Valley were the Desert Cahuilla (Kroeber 1925; Bean 1972, 1978). The published ethnographic and ethnohistoric literature on the Cahuilla is very large. This includes Barrows (1900), Bean (1972, 1978), Bean and Bourgeault (1989), Bean and Lawton (1965), Bean and Saubel (1961, 1963, 1972), Bean et al. (1991), Curtis (1907-1930), Drucker (1937), Gifford (1918), Harvey (1968), Hooper (1920), James (1960), Kroeber (1908, 1925), Lawton and Bean (1968), Phillips (1975), Strong (1929), and Wilke and Lawton (1975) (cf. Dominici 1987:17). The following discussion is taken from a number of these sources and follows Dominici (1987:17-20).

Territory and Language

Cahuilla is a Shoshonean language that belongs to the Takic family of the Uto-Aztecan stock. Of the four Cupan subgroups, Cahuilla is closer to Cupeno than it is to Luiseno (Bean 1978:575). The term Cahuilla may be derived from the term *kawiya* or "master, boss" (Kroeber 1925:693; cf. Bean 1972:575).

INDIO FACTS:

The term "Cahuilla" may be derived from the term Kawiya or "master, boss."

Cahuilla territory was diverse. It consisted of

mountain ranges interspersed by passes, canyons, valleys, and desert, with elevations from 11,000 feet in the San Bernardino Mountains to 273 feet below sea level at the Salton Sink [Coachella Valley]. The Cahuilla occupied most of the area, from the summit of the San Bernardino Mountains in the north to Borrego Springs and the Chocolate Mountains in the south, a portion of the Colorado Desert west of Orocopia Mountain to the east, and the San Jacinto

Plain near Riverside and the eastern slopes of Palomar Mountain to the west. (Bean 1978:575)

Cahuilla lands were bisected by the Cocopa-Maricopa trail heading toward Arizona and were bounded north and south by the Santa Fe and Yuman trails, respectively. The Cahuilla traded primarily with the Gabrielino to the west and the Serrano to the north (Bean 1972:69; Kroeber 1925:578-580; cf. Dominici 1987:17).

The Cahuilla were described by Strong (1929) as falling into three major groups: the Desert, Pass, and Mountain Cahuilla. These distinctions are largely geographic but minor dialectic and some rather important cultural differences exist (Strong 1929:36). The Mountain Cahuilla lived primarily within the San Jacinto and Santa Rosa Mountain ranges (Strong 1929:144-145). The Pass Cahuilla were located primarily within San Geronimo Pass, but Strong (1929:88-89) somewhat arbitrarily includes the desert populations of Palm Springs and Indian Wells within this group. Strong (*ibid.*) notes that these latter groups probably had their own ceremonial unit prior to European contact, but he places them with the Pass Cahuilla because of cultural similarities.

The Desert Cahuilla were those groups within the Coachella Valley from just south of Indian Wells to the northern end of the Salton Sea and the San Diego County line (Strong 1929:37-39). The Desert Cahuilla region also included the neighboring fringes of the San Jacinto and Santa Rosa Mountains to the west (e.g., Martinez Canyon) and the Indio Hills (Thousand Palms, Hidden Palms, Pushawalla Palms, Biskra Palms) and Little San Bernardino Mountains to the east (cf. Strong 1929:39). For the Late Prehistoric Period, the Desert Cahuilla dominated the study region with their settlement-subsistence pattern focused on prehistoric Lake Cahuilla and neighboring oases.

Settlement Patterns

Bean et al. (1991) describe the settlement patterns of the Desert Cahuilla as follows:

Cahuilla villages were generally located in or near the mouth of a canyon or in a valley. They were set up from the floors of

canyons and valleys on one side or the other in order to avoid the significant water runoff coming down the canyons during certain periods. Despite this precaution, flash floods that destroyed entire villages are recorded in Cahuilla oral history. . .

. . . [With the infilling of prehistoric Lake Cahuilla beginning about 1000 years ago] some of the Cahuilla developed a lacustrine economy and lived especially along the western and northern shores of the lake. The Colorado River. . . changed its course. . . about 500 [?] years ago and no longer brought in water. . . As [the lake level] fell the Cahuilla moved their villages and changed their patterns of subsistence to meet the changed circumstances (Wilke 1976). In each period the Santa Rosa Mountain range was an extremely attractive environment for them, providing them with flora and fauna of both the lower, warmer elevations and the higher and cooler ones.

(Bean et al. 1991:7)

During periods when prehistoric Lake Cahuilla dried up, populations remaining in the valley obtained their water from spring-oases, artesian wells, and sometimes from walk-in wells that they excavated (Van Horn 1990:12). Barrows describes this activity:

For generations they have been well diggers. . . The whole valley of the Cabeson is dotted with wells, most of them marking sites of homes long ago abandoned. . . These wells are usually great pits with terraced sides leading down to the narrow hole at the bottom where the water sparkles, built in such a way that a woman with an olla on her head can walk to the very water's edge and dip her painted vessel full.

(Barrows 1900:27 as cited in Van Horn 1990:12).

Strong (1929:32-44) describes an abandoned late 19th century Desert Cahuilla desert village located north of the Martinez Reservation south of the study area (see Figure 4.8-1) as it was interpreted for him by Cahuilla informant, Franciscas Nombre:

At present, as a result of the lowering of the water-table in the Coachella valley, the artificial well from which they formerly obtained their water is merely a dry hole about fifteen feet in diameter and four feet deep, hidden in arrow-weed and cat's claw brush. The mesquite trees which probably determined the location of the village originally have been burned and only blackened stumps remain. Other signs of habitation are faint -- scattered piles of blackened rocks from the fireplaces, and a few sherds. . . of pottery, alone indicate that forty years ago there was a thriving village here. The area one-half mile to the southwest, where natural seepage provided the two main clans with areas for scanty agriculture, is likewise a sunbaked desert; only the diminution in density of the brush indicates that it was once cleared and cultivated. [Figure 4.8-1 below] shows the location of the houses, the irregular grouping of the clans, and the straggling nature of the village.
(Strong 1929:43-44)

A network of trails linked various Mountain, Pass, and Desert Cahuilla villages and were used for trading, hunting, and the maintenance of social ties. Petroglyphs and pictographs marked various sacred sites associated with Cahuilla village lineages (Bean 1978:575; cf. Dominici 1987:17).

Subsistence and Material Culture

The Cahuilla sustained themselves through hunting, gathering, and fishing. Major villages were fully occupied during the winter, but during other seasons task groups headed out in periodic forays to collect various plant foods, with larger groupings from several villages organizing for the annual acorn harvest (Bean and Saubel 1972:126). Bean and Saubel (1972) have recorded the use of several hundred species of plants used for food, building/artifact materials, and medicines. The major plant foods during the Late Prehistoric included acorns, pinyon nuts, and various seed-producing legumes; these were complemented by agave, wild fruits and berries, tubers, cactus bulbs, roots and greens, and other seeds (Bean 1972; cf. Dominici 1987:17).

The hunting and gathering techniques of the Cahuilla were sufficiently developed that some have called them quasi-agricultural (Lawton and Bean 1968). While the practice of agriculture was noted in a Cahuilla village as early as 1823, it is not known whether this occurred prior to contact. Plants grown were those similar to the ones cultivated by the Colorado River tribes, e.g., corn, pumpkins, melons, and watermelons (Bean and Mason 1962:46; Lawton and Bean 1968; Bean 1978:578; cf. Dominici 1987:17).

Hunting focused on both small and medium-sized mammals (rabbits, rodents) and large mammals, such as pronghorn sheep (*Antilocarpa americana*), mountain sheep (*Ovis canadensis*), and mule deer (*Odocoileus hemionus*). While these animals were located primarily in mountain areas, they were known to migrate down to the desert areas during the winter and were often hunted in such places as Martinez Canyon (Bean et al. 1991:8). Desert tortoises were used both for food and for ritual (shell rattles) and household containers (Bean et al. 1991:9). Hunting was done using the throwing stick or the bow and arrow, though nets and traps were also used for small animals (Bean 1972:64-65).

Cahuilla material culture consisted of dome-shaped to rectangular type houses; above-ground granaries; baskets, pottery, and grinding implements; stone tools, arrowshaft straighteners and bows; clothing (loincloths, blankets, rope, sandals, skirts, and diapers); and various ceremonial objects made from mineral, plant, and animal substances (Kroeber 1908, 1925; Bean 1972; Bean and Saubel 1972; cf. Dominici 1987:18).

Sociopolitical Organization

The sociopolitical structure of the Cahuilla, with its complex marriage and kinship structures and well developed cosmology and ritual systems, is discussed in some detail in many of the references cited at the beginning of this section. Dominici (1987:18) has summarized some of the salient points as follows:

Cahuilla society was organized around clans which functioned as corporate

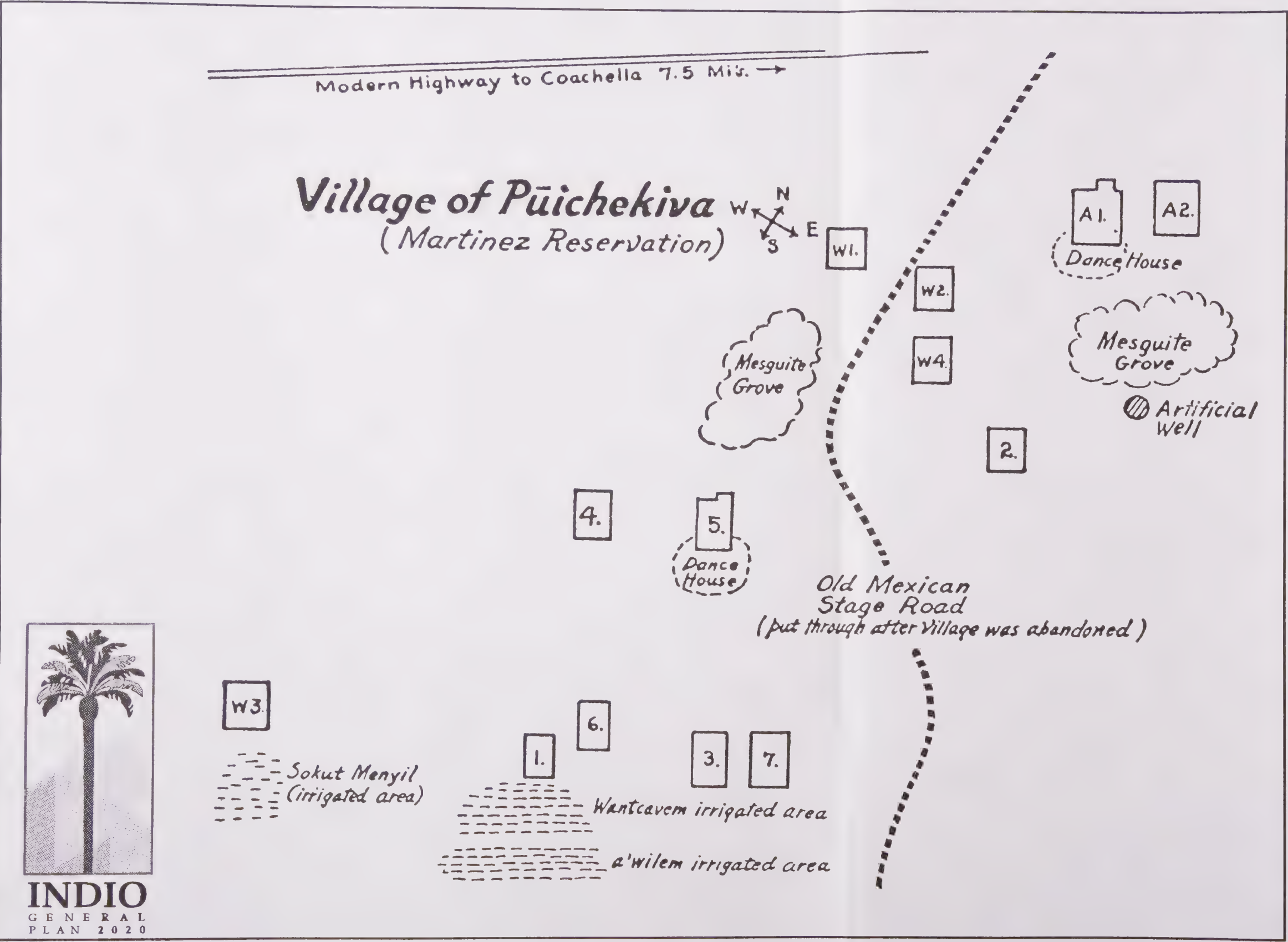



Figure 4.8-1
DESERT CAHUILLA VILLAGE


Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical

political, economic and ceremonial entities. Each clan was composed of 3 to 10 named patrilineages, with one lineage recognized as the founding one (Bean 1978:580). Each clan had a territory, but most were open to all Cahuillas (Bean 1972:85-86).

The Cahuilla recognized two nonpolitical, nonterritorial patrimoieties, *istam* (Coyotes) and *tuktem* (Wildcats). These bodies regulated marriage and integrated ceremonial activity (Bean 1978:580).

The political, economic, and ceremonial affairs of each lineage were supervised by a hereditary headman referred to as the net (Kroeber 1925:691). Usually the net of the founding lineage served as the clan and village leader. The net was assisted by the paxa, who supervised administrative and ceremonial affairs. Shamans (*puvulam*), as a result of their mastery of supernatural lore, also occupied an important position. As a result of their control of different aspects of power within the community, the above officers, together with the *puvulam*, constituted an integrated leadership stratum which crossed clan and lineal divisions (Bean 1978:580-581).

History Since Contact

The arrival of the Spanish in Cahuilla territory brought several *assistencias* or mission outposts created in 1819 (Beattie and Beattie 1939 as cited in Dominici 1987:18), but in general the Spanish, Mexican and early American presence did not greatly impact the Cahuilla social and political structure. The Cahuilla did, however, develop new economic and political strategies to deal with the Hispanic immigrants. By the 1840s, this took the form of confederations of clans and clan remnants under such leaders as Juan Antonio, Antonio Garra, and Chief Cabezon (Bean et al. 1991:6).

The earliest government surveys in the study area date to 1855-56 (Croze 1856 GLO Plat Map). The purpose was to locate township and section boundaries of non-mountainous regions of Southern California (Dominici 1987:18). Numerous Cahuilla rancherias were recorded in the Coachella Valley during this and later government surveys. A number

of such rancherias, along with agricultural fields, trails, and hand dug wells, were recorded in areas now represented on the 7.5-minute Indio and Myoma USGS quadrangles.

Nineteenth and early 20th century Cahuilla rancherias and their associated extractive areas were often relatively dispersed across the landscape. Based on Barrows (1900) and Strong (1929; see also Dominici 1987:22-23), ethnographically known villages which were located within or near the study area include:

- ▶ Paltewat,
- ▶ Palsetamul,
- ▶ Palsetahut, and
- ▶ Iltcunaloni or Temalwahish (La Mesa).

By the end of the 19th century, these earlier settlements were replaced by populations concentrated in the Cabazon, Augustine, and Torres-Martinez Indian Reservations.

Early (and later) GLO and USGS maps also show the location of previously existing natural and biotic features which have been modified or no longer exist:

- ▶ the former course(s) of the Whitewater River as it moved west-east through what is now Indio, and also southeast toward Thermal;
- ▶ the location of former dune areas in Section 2 of Township 5 South, Range 7 East;
- ▶ the location of a former palm oasis in Section 19 of Township 4 South, Range 7 East; and,
- ▶ the location of a former palm grove in Section 1 of Township 5 South, Range 7 East.

As late as 1860, the Euroamericans in the area were outnumbered by the Cahuilla, but the smallpox epidemic of 1863 and additional migration of non-Indians from the east changed this situation dramatically (ibid.). Finally, the railroad brought permanent American settlements to the area by the 1870s.

The combination of epidemics and the taking of Indian lands by the new settlers led to the creation

of Indian Reservations by 1877. Reservations in Coachella Valley include the Agua Caliente Reservation (to the northwest of the study area), the Augustine Reservation (just to the southeast), the Torres-Martinez Reservation (along the northern end of the Salton Sea), and the Cabazon Reservation directly adjacent to the study area (Bean et al. 1991:6). The smallpox epidemic devastated certain lineages and clans and led to a partial breakdown in traditional lifeways which was accentuated by close government supervision of the reservations after 1891. However, much of the traditional religious and political system remained intact and the Cahuilla continued to use many of their traditional hunting and gathering areas (ibid.). The reservations developed as socio-cultural enclaves for Cahuilla culture.

The Cabazon Reservation was created on May 15, 1876; it was increased in size in 1895 and now includes 1,706 acres (Hector 1978:26 as cited in Dominici 1987:19). In 1902, the Bureau of Indian Affairs funded the boring of 25 artesian wells on the Cabazon and Torres-Martinez reservations to help sustain desert agriculture for the resident Cahuilla population which was 38 at Cabazon and 304 at Torres-Martinez (Dominici 1987:19).

In 1918, 40-acre parcels were given to each head of household on the various Cahuilla desert reservations (Hector 1978:28), but by 1923 the water table had dropped from 16 to 250 feet due primarily to Euroamerican agriculture. Some cotton was produced, but by the 1930s it was perceived that the reservation agriculture effort was not succeeding (Hector 1978:32-34 as cited in Dominici 1987:19). Dominici (1987:19-20) continues:

... In 1936, Cabazon petitioned the Mission Indian Agency superintendent for permission to use tribal funds to improve water availability. No response is on record. In 1938, records show that no crops were produced at Cabazon. The government attempted to correct problems in the allotment program and the reimbursement scheme by legislation in the late 1930s. Policies from that time reflect increased federal awareness of tribalism [sic] and the particular environment and subsistence needs of the Native Americans. Finally, in 1941, 105 acres of the 1,480 acres of the Cabazon reservation

were farmed by non-Native Americans. At that time the lands were irrigated through government funds.

During the early 20th century, the Cahuilla turned away from traditional hunting and gathering toward agriculture, stock raising, and wage labor, so that by 1920 most Cahuilla were integrated into the regional economic system. The Great Depression of the 1930s actually led to a resurgence of traditional hunting and gathering activities which were used as a means of survival during a period of high unemployment (ibid.).

As described by Bean et al. (1991:6), World War II brought disruptive influences to traditional Cahuilla lifeways:

World War II and changing economic conditions for small farmers, a drought, and many other factors. . . [contributed] to a decrease of Cahuilla interest in traditional ways as well as a decrease in the exposure of non-Indians to these ways. Many young men served in the military forces. Others left the reservation for war-related jobs. Many elders who had maintained traditions died without passing on significant information about their culture. (Bean et al. 1991:6)

By 1955, it is estimated that the original Cahuilla population of between 6,000 to 10,000 (Bean 1972) had been reduced to less than 550 (James 1960; cf. Dominici 1987:18).

It is only with the relatively important work by ethnographers during the 1960s and 1970s and the continued intrusion of transmission lines, highways, recreational areas, and residential development, that the Cahuilla have taken a much more active interest in the preservation of their language, culture and history (Bean et al. 1991:7). Such institutions as the Malki Museum, the Cupa Cultural Center, and the Agua Caliente Interpretive Center (now in the design stage) reflect this new perspective (ibid.).

Archaeological Sites and Surveys

Functional Site Types

After Bean (1972:70-75), Dominici (1987:23-24) discusses two major types of ethnographically known archaeological sites which dominate the study area: the "seasonal village" and the "intervillage extractive area" which is usually situated along a major trail. Ethnographically, Bean (1972:71) stresses that Cahuilla villages were occupied year-round and were located near dependable water sources and in a ecotonal environment such that 80 percent of the necessary food resources were located within five miles (Bean 1972:73-74). Seasonal forays were made to obtain resources but the village was not abandoned for part of the year. Certainly the rich lacustrine environment around prehistoric Lake Cahuilla would have supported such permanent habitation areas. Seasonal forays probably resulted in both camp sites (temporary habitation sites) and/or food extraction and/or processing sites.

Water was a key factor in determining village location. As Dominici (1987:23) points out:

Barrows (1900:38-40), Bean (1972:71-73) and Strong (1929:43) state that village locations were determined by the presence of water and proximity to food gathering areas (usually dune mesquite habitat) [in the Coachella Valley region]. When a village was located along a water course [such as the Whitewater River], buildings were generally extended along both banks. Village buildings, which were interconnected by pathways, included houses (varying in size from a few feet to 15 to 20 feet in diameter), the ceremonial house (as large as 50 feet in diameter) and sweathouses. In village areas located along streams, water was sometimes diverted into trenches so that it was more accessible for household use and, occasionally, for agricultural purposes.

Bean (1972:71) states that in desert areas houses and other buildings were grouped around a water source in a two to 3-mile area, the houses some 30 to 60 feet apart. A lineage composed of perhaps 25 to

50 houses might be scattered across a 3 to 5 mile area.
(Dominici 1987:23).

Archaeologically, Cahuilla village sites probably contained a mixture of ceramics, lithics (flaked stone), animal bone, groundstone (manos and metates or bedrock mortars) and fire-altered rock (FAR). Fragments of house debris and cremations may also be present.

For more detailed descriptions of Cahuilla structures (residences, communal houses, sweatlodges), see Barrows (1900:40), Bean (1972:71-73), James (1960), Kroeber (1908:63-65; 1925:703-704) and Strong (1929:43-44) (cf. Dominici 1987:23).

The "inter-village extractive area" site type was generally occupied by a small task group for a relatively short period of time. Plant collecting by women may have resulted in a daily visit with perhaps a single overnight stay whereas hunting trips by groups of men may have lasted several days (Bean 1972:75). Plant extraction sites probably left few remains (an occasional stone tool or broken pot); plant processing camp sites may have resulted in the deposition of ceramics, lithics, groundstone, and even fire-altered rock. Hunting sites may have left primarily lithics and fire-altered rock from campfires or hearths.

"Shoreline" Vs. "Playan" Site Types

Dominici (1987:24) notes that sites in the Coachella Valley and the Salton Trough are generally classified as either "shoreline or "playan" sites. "Shoreline" sites are associated with previous stands of Lake Cahuilla. Such sites show evidence for lacustral exploitation. "Playan" sites are not associated with shorelines and do not show evidence for lacustral exploitation; such sites were occupied in the ancient lakebed after desiccation (ibid.).

Many have assumed that sites located below the 40 foot contour line, which represents the last high lake stand of Lake Cahuilla (A.D. 1580), must post-date this period. Sites which dated to previous lake stands would be buried under sediments deposited during subsequent lake stands. Waters (1983) suggested that it took about 10 years to fill the lake and about 60 years for it to evaporate entirely; if the evaporation rate was constant, one might date sites

based on their elevation below sea level (cf. Dominici 1987:24).

As Dominici (1987:24-25) points out, however, there are several problems with this scenario:

- ▶ As noted above, there may have been a fifth infilling of the Salton Trough in the early 1600s which would have created new "shoreline" sites. [The accidental infilling episode that created the Salton Sea between 1905-1907 resulted in a lake level of approximately 198 below sea level (cf. Dominici 1987:25); the current study area's lowest point of elevation is about 50 feet below sea level].
- ▶ Even if a fifth infilling did not occur, the rate of recession of Lake Cahuilla towards the end of the fourth lake stand may have stabilized resulting in a new series of "shoreline" sites situated within the "playan" zone (Sieh ;1981; Schaefer 1986:37; cf. Dominici 1987:25). Schaefer (ibid.) places this shoreline somewhere between sea level and 100 feet below sea level; most of the southeastern, southern and central portions of the study area lie between sea level and 50 feet below sea level, and thus might potentially have "shoreline" sites in what has been viewed as a "playan" zone.
- ▶ Previous lake stands of Lake Cahuilla have been dated around A.D. 850, 950 and 1050, from 1200 to 1350, and from 1500 to 1580 (Dominici 1987:25). While many "shoreline" and "playan" sites situated below the high lake stand (40 foot contour line) may be buried under sediments, the amount of deposition is probably variable and it is quite possible that aeolian or water erosion may have exposed such sites. They may also be encountered as buried deposits during construction or during excavations of known sites.

Prehistoric/Ethnohistoric Archaeological Sites in the Study Area

A records search was conducted by the Eastern Information Center at UC Riverside dated April 10, 1992. This search provided information on previous surveys, known archaeological sites, and the potential for ethnohistoric and historic sites as shown

on a series of 19th and 20th century Plat Maps and USGS Maps.

Appendix D shows the 47 recorded prehistoric and ethnohistoric archaeological sites in the study area. Eight of these are located in the northwest part of the study area (Myoma quad); 12 are situated in the northeast portion (West Berdoo Canyon quad); 11 are located in the eastern, southeastern, and central parts of the study area (Indio quad); and 16 are located in the western part of the project area (La Quinta quad).

Site Types

In terms of site types, two are trail sites, one is a probable food processing site, 33 are probable habitation sites (villages and camp sites), and 11 are of unknown function. Habitation sites were so labelled based on the presence of animal bone, fire-altered rock, and/or human remains/cremations, along with ceramics, lithics and/or groundstone. Sites which contained only ceramics (or ceramics and lithics), but no groundstone, fire-altered rock, or animal or human bone, were listed as function "unknown." They may be food extraction locations, food processing locations or campsites, pot drops along a trail, or even habitation sites whose surface evidence is misleading. A single site containing only groundstone has been labelled a possible food processing site.

No attempt was made to refine this site typology further since the only information available is what artifacts were noted on the surface when the site was recorded. Excavation data are needed to properly determine site function, including seasons of occupation.

While sites that lie between the +40 and 80 foot contour are probably "shoreline" sites, those situated near the springs and oases of the Indio Hills to the north probably are not. Those sites situated below the +40-foot contour line may be "playan" sites occupied after A.D. 1580, but some may be "shoreline" sites associated with a stabilized lakeshore during the recession of the fourth lake stand or a lakeshore associated with a possible fifth infilling that occurred in the 1600s. Some may even be "shoreline" sites associated with earlier lake stands which were buried under sediments but which have now been exposed by natural forces. Because

of this array of potential interpretations of the evidence, no attempt was made to classify sites as "shoreline" or "playan." Site elevations have been provided in Appendix D.

Site Condition and Site Size

Information on the size and current condition of sites is based on a records search at the Eastern Information Center at UC Riverside. There was no evidence that any site had been completely destroyed, though CA-Riv-676 has been mostly destroyed. Prior to a given project, the actual degree of disturbance at a given site needs to be carefully field checked. Note that sites situated in a dunal context may have differential exposure over time, i.e., shifting dune sands may cover parts of the site and expose others, thus potentially changing site boundaries. Furthermore, surface evidence at dunal sites can be misleading in that a limited surface exposure may mask a much greater subsurface cultural deposit.

Level of Investigation and National Register Status

Most of the sites in the study region have been recorded as individual sites or a part of archaeological surveys. Very few have been formally evaluated for significance through subsurface archaeological testing. Such testing is generally necessary whether a project falls under CEQA or federal legislation (Section 106 of the National Historic Preservation Act). It is possible that some sites have been tested and that reports have not been sent to the Eastern Archaeological Information Center at the University of California, Riverside. To date, none of the sites situated within the study area have been determined eligible for the National Register, though a determination is pending for CA-Riv-2207.

Known Ethnohistoric Sites Not Recorded as Archaeological Sites

A study of 19th and 20th century GLO plat maps and USGS maps, the ethnographic and ethnohistoric literature (especially Barrows 1900; Strong 1929; Bean 1991 et al.), and selected archaeological studies (cf. Dominici 1987; Van Horn 1990;

Berryman 1976) revealed clues regarding the location of 19th and 20th century Cahuilla villages, houses, wells, trails, cemeteries, and potential extractive areas.

Aside from important evidence regarding trails, these sources indicated that the Indio quad contained several ethnohistoric village and extractive sites spread out over the landscape. Indian rancherias were noted by Croze's 1856 GLO Plat Map in Section 24 of downtown Indio in an area now covered with residences, and in other areas to the east. In addition, Berryman (1976:7) reports that a Cahuilla informant, Joe Benitas of the Cabazon Indian Tribal Business Committee, stated there used to be a cemetery dating to the 1800s in downtown Indio in an area that has not been fully developed and portions of this cemetery may still be intact.

Finally, information in Bean et al. (1991) also suggested that an Indian village called Pal the-wat ("water" and "pinyon pine") (cf. Barrows 1900:33; Bright and Hill 1967:xxvi) was located in the vicinity of Indio, "at or near the Twelve Apostle Palms. . .this village stood about 10 to 20 feet below sea level and about 50 to 60 feet below the high stand of ancient Lake Cahuilla (+40')." (Bean et al. 1991:71).

An analysis of potential locations based on old maps and topographic contours strongly suggests that the site was located in Section 13 of T5S, R7E. This section has been heavily impacted by recent housing developments (where no surveys were conducted) and by modern agriculture. It is not known whether any portion of the site remains intact. It is also important to note that other historic evidence places Twelve Apostle Palms and its associated spring in a different location, i.e., near the intersection of Madison St. and 38th Avenue in Section 4 of the same township (Coachella Valley County Water District 1978:13-14). However, 19th and 20th century topographic maps show no evidence for a spring or homestead at this location, whereas the 1941 USGS Coachella quadrangle suggests that both are present in Section 13 a few miles to the east.

Percentage of the Study Area That Has Been Surveyed

The study area for the Indio Master EA is approximately 26,760 acres (41.8 square miles). Of

that total, the records search provided by the Eastern Archaeological Information Center indicates that approximately 6,340 acres (23.7 percent) have been surveyed by professional archaeologists.

Sensitivity Assessment

Previous Efforts In California

A wave of sensitivity assessments created for local jurisdictions proliferated in the 1970s. These were of three major types: (1) sensitivity maps with areas (often township sections) marked as areas of "high," "moderate," and "low" sensitivity for cultural resources; (2) methods for assessing sensitivity on a parcel-by-parcel basis using criteria focusing on a combination of terrain analysis (e.g., presence of water) and the location of known archaeological sites; and (3) types combining aspects of the first two.

Although not always stated, these schemes often made one or more of the following assumptions: (1) that areas likely to contain "village" sites were much more important or "sensitive" than areas that probably did not contain such sites; (2) that certain kinds of sites (artifact scatters, small camp sites) were not very important; and (3) that areas where site densities are likely to be low were also not important. As a result, areas thought to contain few sites or only artifact scatters and small encampments were frequently labelled as areas of "low" sensitivity.

While these assumptions were based on good intentions, what often transpired was the writing off of "low" (and even "moderate") sensitivity areas by local planners. As a result, such areas were either not surveyed at all or were surveyed by nonarchaeologists, frequently resulting in the destruction of archaeological resources before their significance could be properly evaluated. As a result, for many areas archaeologists are unable to reconstruct an adequate picture of the overall subsistence-settlement patterns and how they changed over time, because many areas of the landscape were written off. This problem has been compounded by the fact that the criteria used by many past creators of sensitivity maps were often based on inadequate or incorrect data. As a result, some major habitation sites have also been destroyed because of wrong assumptions about the probability that such sites were not present.

Past Efforts in the Study Area

A study of the literature produced three previous efforts to assess cultural resources sensitivity in the study area. The first was by Berryman (1976) for the City of Indio and the second was prepared for the CVAG by Comarc Design Systems and Eisner-Smith Planners (1979). Both provided methods for assessing sensitivity on a project specific basis and both resulted in the probable loss of cultural resources due to inadequate sensitivity criteria and "no survey required" recommendations in certain types of cases. The third was prepared for the County of Riverside and focused on the CVEZA (Van Horn et al. 1990). It corrects many of mistakes of these previous efforts, but it only covers part of the study area and does not provide section-by-section sensitivity assessments which can help cities in their constraints analyses associated with General Plans or Specific Plans.

Berryman (1976)

Berryman's (1976) effort was entitled, "Recommended Archaeological Guidelines for the City of Indio." His study provided a list of questions that planners should ask when considering the development of a given parcel (Berryman 1976:5-6). These questions related to the physical setting and location of the project, the type of project, and the archaeological setting. Based on the answers to these questions, Berryman (1976:6) provided the following guide to planners regarding the "Determination of the Need for an Archaeological Study":

Based upon the assessment [the answers to the questions], the need for an archaeological study can be determined. If the project occurs in a dunes setting or at 40+ feet above sea level, then a field survey will need to be undertaken. If the area is intensively disturbed or the project is a reconstruction of existing facilities, road resurfacing or replacement construction then a prehistoric archaeological study need not occur. However, if it is a new construction project or the answers to questions 12 to 18 are yes, then a complete archaeological study will have to occur.

These guidelines ensure that a field survey will be taken along the margins of the prehistoric Lake Cahuilla and in areas containing dunes, but nowhere else. What about along previously existing watercourses (Whitewater River)? What about "playan" sites occupied after the desiccation of Lake Cahuilla? and so forth.

Questions 12 to 18 ask whether the property contains "shell," "stone items not shaped by natural agencies," "potsherds," "ash or soil discoloration," "rock wall structures, wells or rock art," or "recorded archaeological sites." An additional question asks whether there are any "known cultural values" associated with the property. Although this does not exhaust the list of potential archaeological artifacts or features one might find in the Coachella Valley, the real problem is how will their presence or absence be determined? The answer is by conducting a survey of the property. Such a survey could be conducted by a city planner, but it is unlikely that he or she has the training necessary to recognize the full range of archaeological artifacts and features. As a result, sites will be missed. Furthermore, Berryman's guide could be interpreted to mean that the answer must be "yes" to all of questions 12 to 18 before a survey is required, something which is very unlikely to occur.

In addition, Berryman (1976:7) suggests that city street, utility, and sidewalk construction would not impact cultural resources buried beneath them. Work by Chambers Group (cf. de Barros et al. 1990) and others in San Juan Capistrano (Magalousis 1990, personal communication) clearly indicates that prehistoric and mission period deposits were not necessarily destroyed by older street construction and utility trenches may clearly reveal the presence of intact deposits.

In short, the use of Berryman's (1976) guidelines have potentially resulted in the loss of prehistoric and ethnohistoric cultural resources, such as in Section 13 of T5S, R7E, where residential development has occurred in an area where ethnographically recorded Indian settlement is known to have existed.

Coachella Valley Association of Governments Study (1979)

A "Coachella Valley Archaeological Assessment Model" forms an appendix to the Coachella Valley Master EA, prepared by Comarc Design Systems and Eisner-Smith Planners. The archaeologist who prepared the appendix is not identified. The archaeological sensitivity map on file at the County Surveyor's Office shows areas of high, moderate, and low sensitivity for archaeological resources. High areas associated with the present study area focus primarily on the prehistoric Lake Cahuilla shoreline and associated dunal areas (but not all of such areas) and on the Whitewater River drainage west of Indio.

This archaeological assessment model uses many useful criteria for designating high sensitivity areas, including many of the ones used in this study (see below). They say they used information from 19th century GLO plat maps for the locations of Indian rancherias and archaeological and historic sites, but their designation of high sensitivity areas do not seem to fully reflect this. It is also clear that they did not adequately examine ethnographic and ethnohistoric sources (Barrows 1900; Strong 1929), though more recent sources (Bean et al. 1991) were not available to them. In addition, some areas where designated as "high" due to their "pristine and undisturbed nature." The relationship between lack of disturbance and archaeological potential is not exactly clear.

Sections designated as having "low" potential were those heavily affected by urbanization, those which lacked key environmental indicators, and those affected by intense agricultural activity. Unless the agricultural activity involved deep subsoiling and/or ripping, sites are not likely to have been destroyed. In the Midwest, there are thousands of known archaeological sites, all within agricultural areas.

Overall, the CVAG sponsored sensitivity scheme was adequate. However, the "survey matrix" developed for planners to help them to decide whether an archaeological survey was needed has one serious problem. Basically, development parcels under 80 acres do not have to be surveyed if they have been designated as having "moderate" sensitivity, and parcels under 320 acres do not have to be surveyed in many instances if the land has been designated as having "low" sensitivity. This

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dismissal of potential cultural resources in "moderate" and "low" sensitivity areas leads to the loss of important subsistence-settlement data that cannot be recovered.

There is no guarantee that areas designated as having "moderate" or "low" sensitivity do not have important cultural resources. Even if sites within "moderate" and "low" density areas are found not to be "important" (significant) cultural resources after evaluation (subsurface testing), the evaluation process provides basic data needed for understanding the overall subsistence-settlement patterns in a region.

The goal of sensitivity designations is to serve as a guide for a constraints analysis of the property covered by the Master Environmental Assessment or General Plan; they should not be used to make negative declarations for cultural resources. All property development covered under CEQA should be surveyed by a professional archaeologist prior to project approval.

Van Horn et al. 1990

Van Horn et al. (1990) did a cultural resources sensitivity overview for the CVEZA. This area covered 27,000 acres and included much of the town of Indio and much of the Whitewater River drainage. It did not include major portions of the study area situated north and south of developed Indio proper. This study did consult the available ethnographic and ethnohistoric literature and did examine 19th century GLO plat maps and USGS maps. Ethnographic/ethnohistoric Indian sites (rancherias, wells, houses) were field checked. In general, such field checks were negative, but the authors point out that agricultural disturbance may have resulted in either their destruction or their burial (Van Horn et al. 1990:53). They also note that presently or previously existing water sources (streams/rivers, wells, springs) and mesquite thickets are archaeologically sensitive (Van Horn et al. 1990:55). Agricultural development, river channelling, and the commercial exploitation of mesquite have erased many of these features from the landscape.

Van Horn et al. (1990:56) also agree with the present author that all potential adverse effects (impacts) to cultural resources by proposed

development projects subject to CEQA require an archaeological survey of the property, regardless of its sensitivity designation. However, these authors also note that certain types of projects which are highly unlikely to impact prehistoric and ethnohistoric archaeological sites could be exempted, e.g., a borrow pit (where all resources would have been destroyed) and a paved area (where they could not be seen).

The Van Horn study did not designate areas as being of high, moderate or low sensitivity. This was perhaps not done for fear that low and/or moderate areas would not be surveyed. However, such sensitivity maps are useful for the planner and the potential developer for constraints analyses; therefore, we have created such a map (see below).

Keeping the above in mind, the next sections discuss how sensitivity determinations were made and how sections were so ranked for the Planning Area.

Types of Data Used to Assess Cultural Resources Sensitivity

The following kinds of data were used to make semi-quantitative assignments of sensitivity for each section (in some cases, parts of sections):

- ▶ location of known archaeological sites based on previous surveys and site records;
- ▶ the nature of known archaeological sites;
- ▶ terrain analysis (i.e., presence or absence of dunes with or without mesquite) elevation (above or below the 40 foot contour line); presence or absence of springs, oases, and river/stream courses; mouth of canyons; presence of fault lines running in the northern part of the study area (springs often appear and disappear over time along fault lines); and potential for rockshelters.
- ▶ the study of 19th and early 20th century GLO plat maps and USGS quadrangles showing the original locations of dunes, springs, palm oases and palm groves, and major watercourses prior to manmade channelling, e.g., for the Whitewater River;

- ▶ a study of these same maps along with the ethnographic, ethnohistoric, and archaeological literature cited above.

The ethnohistoric period sites have been fairly well documented in the references cited above. Letters of inquiry and telephone calls were also made to local Native American representatives regarding any sites which may have been overlooked. Nonetheless, it is strongly recommended that any surveys conducted in the study area be preceded by a records search at the Eastern Archaeological Information Center that includes an examination of old GLO plat and USGS maps. Local Native American Representatives should also be contacted for their knowledge and concerns. A list of potential representatives can be provided by Katherine Saubel, Commissioner of the Native American Heritage Commission, or one can contact local Native American groups directly.

Semiquantitative Sensitivity Rankings

A cultural resources sensitivity map has been prepared essentially at the level of the township section (see Figure 4.8-2). Categories assigned include the following:

- ▶ high,
- ▶ moderate to high,
- ▶ moderate,
- ▶ low to moderate, and
- ▶ low.

A section or portion of a section marked as having "high" sensitivity is generally characterized by two or three (or more) of the following: (1) it is along or not far above the ancient lakeshore of prehistoric Lake Cahuilla (+40 contour line); (2) previous surveys within the section have shown that archaeological sites are present; (3) it is in an area of dunes; (4) it is in an area where springs are known or thought to have previously existed (particularly along fault lines); (5) it is at the mouth of canyons or other drainages as they exit mountainous areas; (6) Indian rancherias or cemeteries are known to have existed within the section; or (7) the section is located along a previous course of the Whitewater River. A couple of sections have been assigned a rating of "high sensitivity" based solely on the presence of the ancient shoreline (+40-foot contour) of Lake Cahuilla within the section.

A section marked "moderate to high" sensitivity generally meets only one or two of the criteria listed above.

A section or portion of a section marked "moderate" usually meets only one of the criteria listed above and/or surveys in adjacent sections have shown sites to be present on similar terrain.

Two sections have been labeled as "low to moderate" sensitivity. In both instances, extensive agricultural disturbance in much of the section has reduced the importance of other factors that might have resulted in a "moderate" rating (see below).

A section or portion of a section marked as "low" sensitivity has already been entirely surveyed and no sites were recorded or has been entirely (or almost entirely) developed/graded; or has been so disturbed by agricultural activities (subsoiling, ripping, or field/dune leveling) that there is little potential for archaeological sites.

In total, the study area contains the following distributions of rankings:

High: The west half of Section 30 and the southwest quarter of Section 35 of T4S, R7E; Sections 1, 2, 4, the east half of 5, 8, 9, the north half of 11, 12, the southeast portion of 14, 16, 20, 21, 23, 24, 28, 29, and 33 to 35 of T5S, R7E; and Sections 7, 17, 19, 20, and 30 of T5S, R8E.

Moderate to High: Sections 32 and 33 of T4S, R8E; Sections 3, 13, and 25 of T5S, R7E; Section 18 of T5S, R8E; and Section 3 of T6S, R7E.

Moderate: Section 29, most of Sections 34, 35, and 36 of T4S, R7E; the west half of Sections 5 and 7, the south half of 11, 15, 22, 26 and 27 of T5S, R7E; and Section 8 of T5S, R8E;

Low to Moderate: Section 10 of T5S, R7E; Section 2 of T6S, R7E.

Low: The east half of Section 30 and 31 and the southeast quarter of Section 34 of T4S, R7E. Section 6 and all but the southeast portion of Section 14 of T5S, R7E; and Section 6 T5S, R8E.

When Should an Archaeological Survey be Conducted?

All property associated with development projects covered under CEQA (as well as Section 106 of the National Historic Preservation Act) should be surveyed by a qualified professional archaeologist. This should not be a reconnaissance or intuitive survey; it should be an intensive survey that covers all areas which can be feasibly surveyed. All such surveys should be preceded by a records search at the Eastern Archaeological Information Center at UC Riverside. This records search tells the archaeologist about what kinds of sites are likely to be present, what property has already been surveyed, and what sites have already been recorded.

Involving the Eastern Information Center in the Planning Process

The Eastern Information Center is in the best position to determine whether a survey of the property is warranted and to make other kinds of recommendations regarding potential cultural resources. It is therefore recommended that the City of Indio Planning Department inform the Eastern Information Center about all proposed development projects under consideration and ask for their recommendations. This is common practice in many cities in Riverside County and in southern California.

Native American Involvement

It is strongly recommended that local Native American representatives be contacted for their input at the survey stage; this was also the recommendation of Drew Pallette of the Coachella Valley Archaeological Society (Pallette, personal communication, April 1992). Kathryn Saubel, a Cahuilla and a Commissioner on the Native American Heritage Commission, can provide names of potential contacts from the Agua Caliente, Cabazon, Augustine, and Torres-Martinez Reservations. Mr. Pallette of the Coachella Valley Archaeological Society also has a list of potential contacts. Minimally, one can contact the tribal chairpersons.

4.8.2 Historic Resources

History

From the late 1700s, Spanish and Mexican exploratory and military expeditions traveled through the Coachella Valley on their way from Sonora in Mexico to Los Angeles and northern California. American miners and settlers also passed through the area, using the San Geronimo Pass to the northwest for access to other destinations in California.

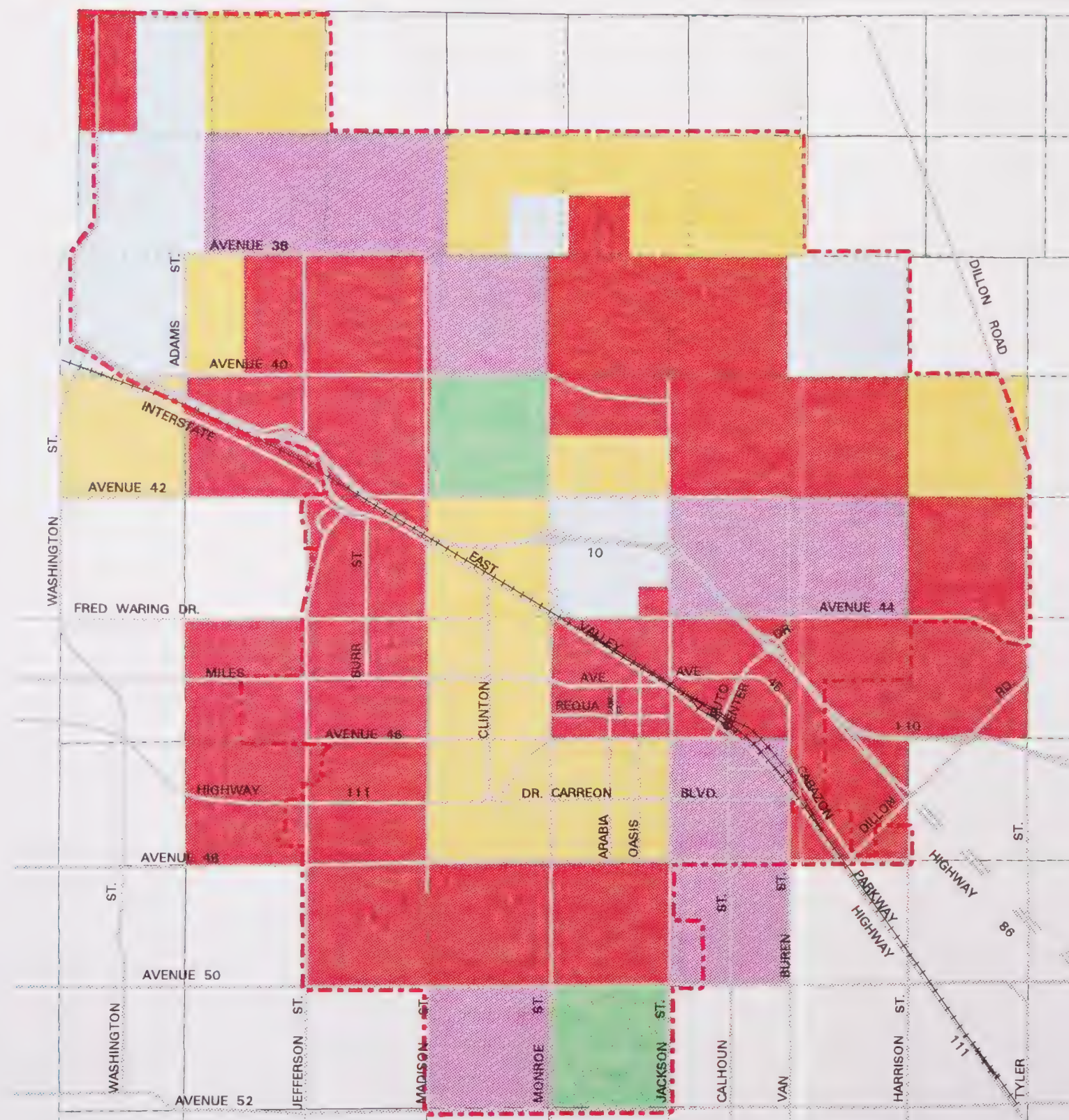
INDIO FACTS: *The railroad brought permanent American settlements to the area by the 1870s.*

Settlement in the Indio region came, as it did with many other desert towns, with the Southern Pacific Railroad. A party lead by Lieutenant Robert Williamson explored the region for the railroad in 1853 (Dominici 1987:20). While the Government Land Office sectioned the Coachella Valley in 1855-56, little was plotted on their maps beyond several roads and well locations (GLO Plat Maps 1856). Surveyed in 1872, Indio, halfway between Yuma and Los Angeles and near an Indian reservation with available labor, was chosen as a suitable location for a railroad depot. Construction of the railroad proved to be an arduous task; railroad crews were housed in a company bunkhouse, complete with a 24-hour restaurant called "T-bone" (Nordland 1978:14). The railroad began running trains from Los Angeles to Indio in 1876; the route was finished to Yuma the following year. Originally named Indian Wells, the name was changed Indio (Spanish for "Indian") to avoid confusion with other localities (Gunther 1984:251). A siding for the railroad was also constructed at Myoma, located within the project area northwest of Indio (Gunther 1984:346).

In addition to its crew facilities, the Southern Pacific constructed a six-stall wooden roundhouse for its locomotives and a car department for repairs. Albert G. Tingman, who arrived in Indio as railroad crew



INDIO
GENERAL
PLAN 2020



Sensitivity

- Low
- Low-Moderate
- Moderate
- Moderate-High
- High

NOTE: Under CEQA, archaeological field surveys are required regardless of a parcel's cultural resources sensitivity rating.

Figure 4.8-2
PREHISTORIC / ETHNOHISTORIC
CULTURAL RESOURCES SENSITIVITY



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

boss in 1877, became the telegrapher and station agent in 1883. He resigned from the railroad two years later to open a store, stable and corral for travellers, mining prospectors and freighters (Nordland 1978:14). Tingman exemplified many early inhabitants of Indio, who came with the railroad and then settled in the area.

A formal Indio townsite was surveyed and the plat map was filed in 1888 with the San Diego County Recorder. In 1893, part of the newly designated Riverside County, Indio became one of the 12 judicial townships (Gunther 1984:251-252). By 1896, the city held 50 inhabitants. A school was established and housed in an adobe constructed on the northeast corner of Fargo and Bliss, where the Elks Lodge is now located. The school was also used for church worship (Nordland 1978:31). Growth of the town remained slow as the century drew to a close.

**INDIO
FACTS:** *In 1893 Indio
became one of the
12 judicial
townships in
Riverside County.*

Indio began to develop more rapidly during the Twentieth century. A map of the town, illustrating lots in 1900, indicates most of the town's planned development existed in an area bounded by Indio Avenue on the north, Jackson Street on the east, Requa Avenue on the south and Park Street on the west (Figure 4.8-3). However, as the 1904 USGS 15-minute Indio quadrangle indicates, actual development within the area was scattered (Figure 4.8-4). Most of the early settlement was by families such as the Gales and Courtneys, attracted by the "Desert Entry" Homestead Act (Nordland 1978:33). Artesian wells or other available water sources probably influenced the placement of these first homesteads. Early cultivated crops included melons, vegetables and date palms. Date palms from Algeria were sent to the region by the USDA in 1890; various types of offshoots were experimented with to find the varieties best suited for the region. In 1904 the USDA established a date experiment station near Mecca; the U.S. Date and Citrus Station moved to its location 2 miles west of Indio in 1907

(Nordland 1978:50). By 1909, the Indio school census indicated the school district held 43 families with 82 children (Nordland 1978:115).

Water, or more specifically, the control of water, was to govern much of the development of the valley. Individual homesteaders claimed water from the nearby canyons and oases and constructed ditches and pipelines to bring the water to their land. The Southern Sierras Power Company completed an electric transmission line to the Coachella Valley in 1914, providing the power needed to pump water wells (Nordland 1978:34). With the underground water supply strained by pumping, the CVWD was formed in 1917 to find new water sources for the Valley's irrigation needs. The District entered into a government contract under the Kettner Bill to survey the Coachella Valley (All American) Canal route in 1919-1920. This project was to bring Colorado River water to the Valley. As part of the Swing-Johnson Bill, construction on the canal began 18 years later; the canal was completed in 1948. Accompanying the system was an underground water distribution system, drainage works and a flood protection system (Nordland 1978:10).

At the other end of the water control issue, stormwater created flooding problems across the valley. The CVWD was formed in 1915 and began construction on a four mile levee to divert the Whitewater River around Indio. At that time the river followed a meandering course south of the town (see Figure 4.8-3). Before the levee could be completed, Indio and the Coachella Valley suffered a severe flood of the river in 1916. Eleven miles of the Southern Pacific Railroad road bed washed out between Thousand Palms and Whitewater. New studies proposed the construction of a dam and diversion at Point Happy in addition to levee construction. The Stormwater District also began filing appropriations for water from canyons and streams to attempt to keep this water for replenishment of the underground water supply. Other floods occurred in 1927, 1938, 1939 and 1948, leading to more levee construction along the Whitewater and further management of canyon and stream water. The Coachella Valley Stormwater District merged with the Coachella Valley Water District in 1937 (Nordland 1978:18-20,99). The District began providing domestic water in 1961 (Nordland 1978:93).

ENVIRONMENTAL RESOURCES

Tourism has also played a role in Indio's growth. In 1901, the *Riverside Press* reported valley amusements consisted of "tennis, croquet, baseball, mountain climbing, and tramps along the desert." (Nordland 1978:37). As early as 1903, N.O. Nelson opened a tent health camp, just to the west of the Indio railroad depot, to take advantage of the highly publicized health benefits of the desert (Nordland 1968:114). Other visitors were to follow, especially in the winter months, to enjoy the desert. Golf courses were established in the region as early as 1926 and remain a tourist draw (Nordland 1978:22). The modern Lake Cahuilla, created at the terminus of the All American Canal in 1969, is also a popular recreation facility (Nordland 1978:120).

Indio was incorporated in 1930 (Gunther 1984:252). The first mayor was LeRoy Pawley, owner of the Desert Theater on Fargo Street (Nordland 1978:119). Indio's agricultural economic base proved somewhat resistant to the depression of the 1930s; by the 1940s, the arrival of General George S. Patton's Desert Training Center brought some prosperity to the area, as some soldiers settled in the area permanently. Agriculture remains a mainstay of the region's economic base, while services connected with commerce, retirement, recreation and winter residency are also contributing factors (Van Horn et al. 1990:17).

be taken into consideration. Some additional potential historic buildings are presented in Table 4.8-3; no more information was available on these buildings.

Recorded Historic Resources

Historic Archaeological Sites

Only two historic archaeological sites have been recorded by previous surveys within the project area - RIV-3794-H and RIV-3955/H (Table 4.8-1). These two sites are located north of Indio. Both sites are described as trash dumps; however, little other information on these sites is available. Informal trash disposal sites are commonly created by individual dumping in desert areas adjacent to but removed from developed areas and both of these sites probably represent this activity.

Historic Buildings

Table 4.8-2 lists the historic buildings that have been identified by previous surveys. This list was compiled in the 1980s; an attempt has been made to update the list, but the limitations of the data must

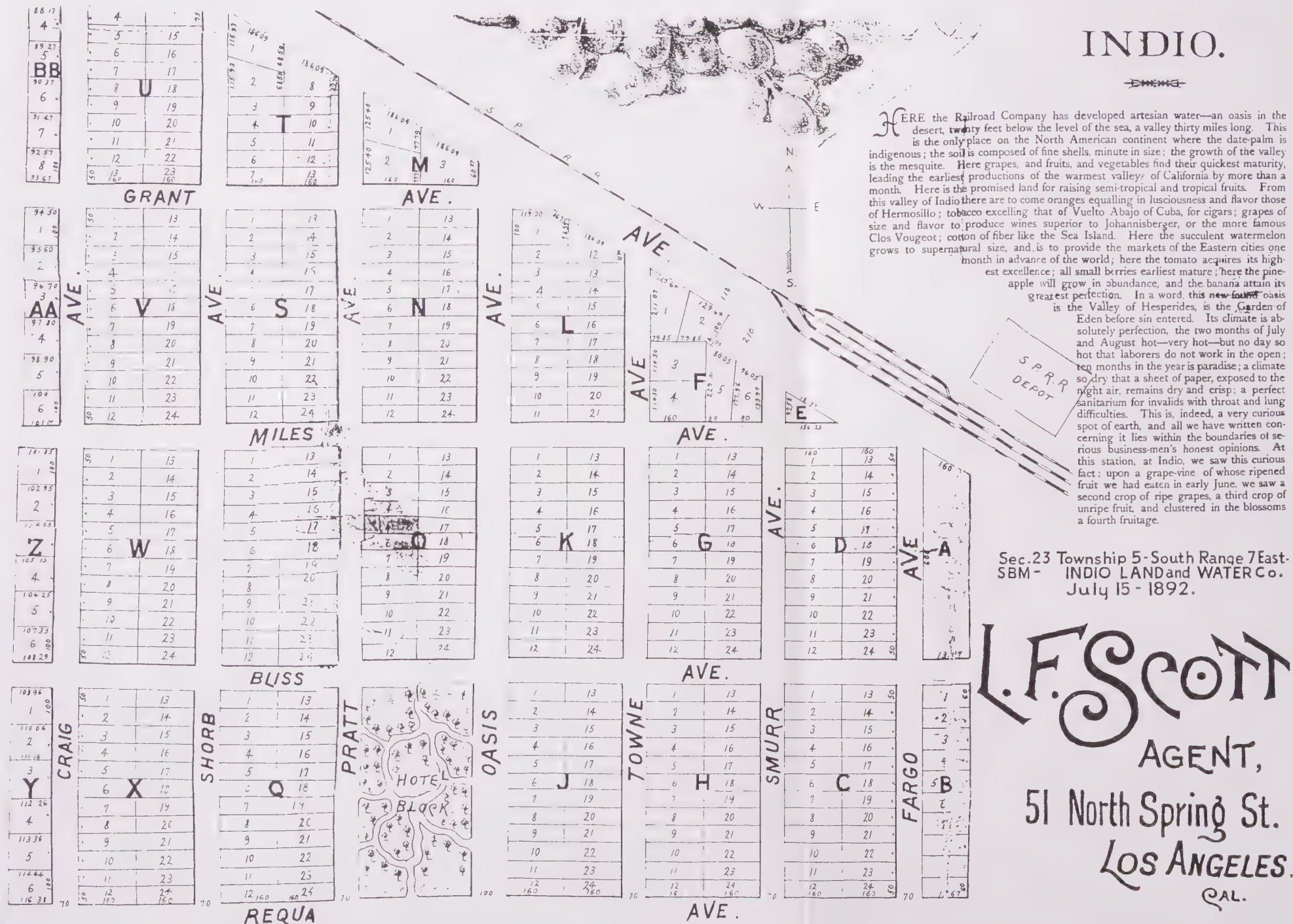
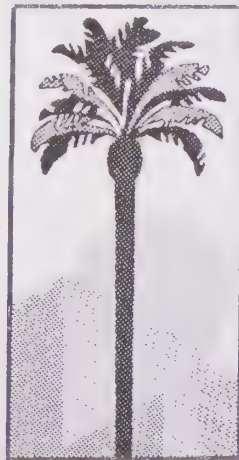


Figure 4.8-3
1900 PLAT OF INDIO



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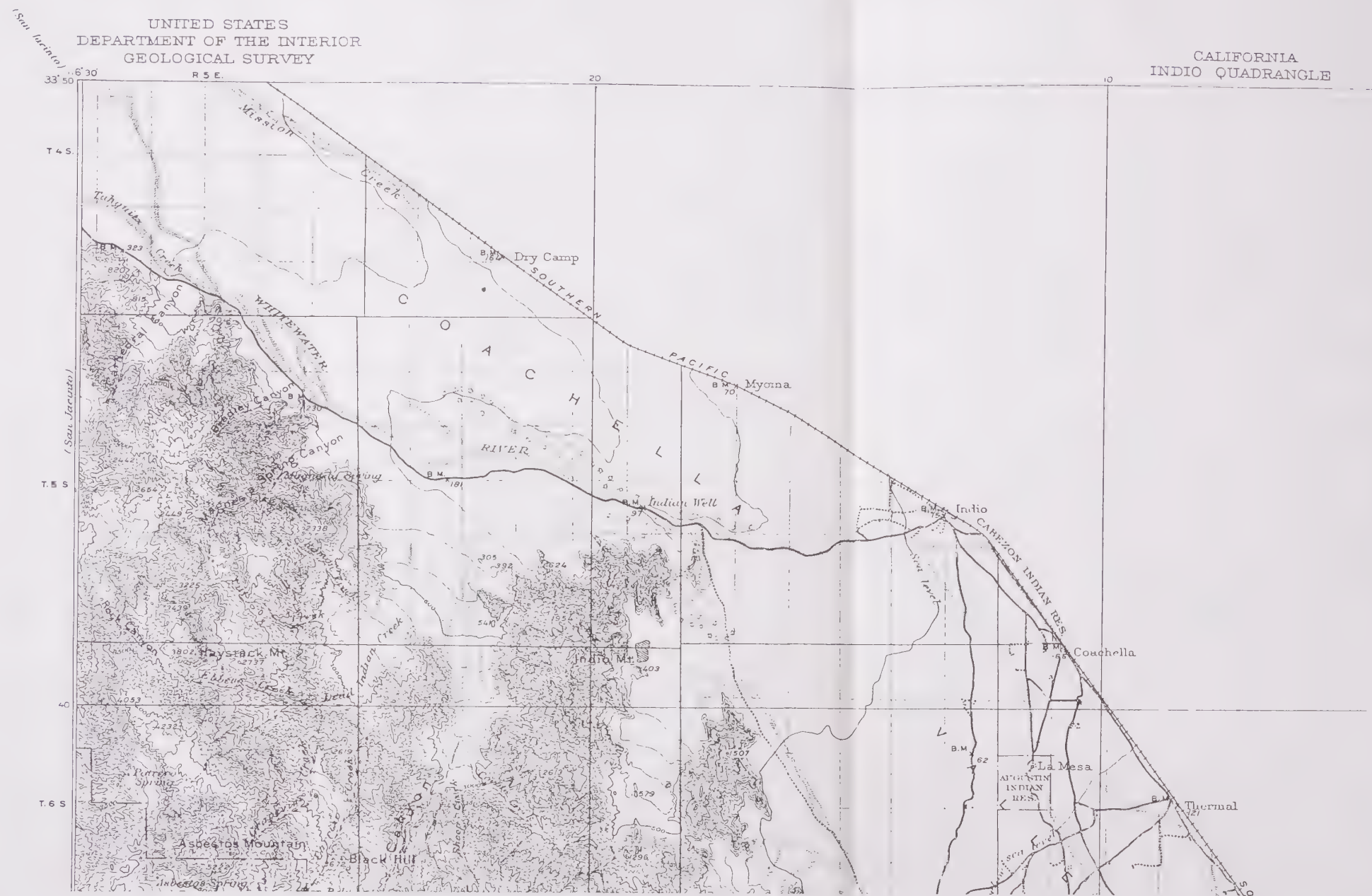


Figure 4.8-4
1904 USGS INDIO QUAD



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Table 4.8-1

HISTORIC ARCHAEOLOGICAL SITES

Site Number	Township, Range and Section	Site Size	Site Type	Site Attribute	Information Base
RIV-3794-H	5S,8E Section 18	23 feet x 6.5 feet	Historic	Trash Dump	Surface Survey
RIV-3955/H	5S,7E Section 12	114.8 feet x 98.4 feet	Prehistoric/ Historic	Trash Dump	Surface Survey

Table 4.8-2
INVENTORIED HISTORIC RESOURCES

Common Name	Historical Name	Parcel Number	Address	Historical Use	Date	Status*	Destroyed*
None	Astor Ranch	614-150-008-9	48th St., NW Corner	Single Family	1925	NR/E	
None	None	611-103-001-5	82331 Bliss Ave	Multifamily	1948	INE	
None	None	611-163-020-8	45232 Deglet Noor	Multifamily	1922	NR/E	
Desert Theatre	None	611-174-020-2	42265 Fargo St.	Theater	1930	LR	
Elk's Club/The Oasis	Elk's Club/The Oasis		45297 Fargo St.	Multifamily	1920	NR/ED	
None	None	611-213-022-4	45555 Fargo St.	Multifamily	1920	NR/ED	Y
Arabian Nights Pageant	Arabian Nights Pageant Stage	614-040-002-3	0 Highway 111	Fairgrounds	1947	LR	
Hotel Potter	Hotel Potter	611-174-023-5	82997 Indio Blvd.	Hotel/Motel	1920	NR/E	Y
None	None	614-070-003-7	46513 Jackson St.	Multifamily	1950	INE	
none	None	611-151-011-3	44860 King St.	Commercial Bldg	1925	NR/ED	
None	None	611-141-008-0	44893 King St.	Commercial Bldg	1925	NR/ED	
None	None	611-164-004-7	45120 King St.	Multifamily	1925	NR/E	
None	None	611-164-005-8	45158 King St.	Multifamily	1930	NR/ED	
None	None	611-163-012-1	45161 King St.	Multifamily	1930	NR/ED	
Hopi House	Hopi House	617-200-006-2	46161 Madison St.	Multifamily	1937	NR/E	
None	None	611-075-006-4	82452 Miles Ave.	Commercial Bldg	1930	NR/E	?
Coachella Valley Museum	The Smiley Place		82626 Miles Ave.	Single Family	1926	NR/E	
None	None	611-151-026-7	82684 Miles	Multifamily	1925	NR/ED	
Hotel Indio	Hotel Indio	611-174-030-1	82923 Miles Ave.	Single Family	1925	NR/E	
None	None	611-151-019-1	44855 Oasis St.	Single Family	1925	NR/ED	
Michaelson Family Home	None	611-151-021-2	44885 Oasis St.	Single Family	1925	NR/ED	
Submarine	Submarine	611-151-021-2	44885 Oasis St.	Single Family	1922	NR/E	?
None	None	611-151-022-03	44899 Oasis St.	Multifamily	1925	NR/ED	

Table 4.8-2

INVENTORIED HISTORIC RESOURCES

Common Name	Historical Name	Parcel Number	Address	Historical Use	Date	Status*	Destroyed*
Bungalow Court	None	611-151-023-4	44911 Oasis St.	Ancillary Bldg	1925	LR	
Indio Realty	None	611-151-028-9	44967 Oasis St.	Single Family	1925	LR	?
None	None	611-193-013-5	45679 Oasis St.	Multifamily	1930	NR/ED	
Nyback Realty	None	611-193-024-5	45703 Oasis St.	Multifamily	1925	LR	
None	None	611-132-010-2	45831 Smurr St.	Multifamily	1930	NR/ED	
<p>*KEY</p> <p>Status: NR/E = appears eligible for the National Register of Historic Places NR/ED = appears eligible for a National Register District LR = of local interest; appropriate for a local Historic Register INE = ineligible for the National Register; may be of local interest</p> <p>Destroyed: Y = recently destroyed ? = possibly destroyed</p>							

Table 4.8-3

SURVEYED PROPERTIES WITH POTENTIAL HISTORIC
AND/OR ARCHITECTURAL SIGNIFICANCE

Address	Property Description
44-455 Clinton Street	U.S. Date and Citrus Station
81-279 Date Palm Avenue	Residence?
45-198 Deglet Noor Street	Residence?
45-202 Deglet Noor Street	Residence?
45-222 Deglet Noor Street	Cottage
45-224 Deglet Noor Street	Cottage
45-226 Deglet Noor Street	Cottage
45-228 Deglet Noor Street	Cottage
Southeast Corner of Deglet Noor Street and Miles Avenue	Former Motel
83-089 Avenue 46 (Highway 111)	Thomas Jefferson School
83-879 Avenue 46 (Highway 111)	Desert Sands Unified School District Building
SE Corner of King Street and Miles Avenue	Former Church
45-160 (?) King Street	Residence?
45-14? King Street	Apartments
NW Corner of King Street and Bliss Avenue	Apartments
82-68? Miles Avenue	Residence
81-264 Palo Verde Avenue	Residence?
81-351 Palo Verde Avenue	Residence?
81-391 Palo Verde Avenue	Residence?
45-901 Smurr Street	Residence?

A brief windshield survey of Indio indicates that many of these buildings are best evaluated in the context of two potential districts. One of these districts would encompass the early commercial district of Indio, in the 82-900 block of Miles Avenue to the 45-200 block of Fargo Street. Unfortunately, one of the significant buildings of this collection, the Hotel Potter, has been a recent victim of arson. Remaining properties include the Hotel Indio, a portion of the Hotel Potter, and several facades and buildings along Fargo Street (Figures 4.8-5, 4.8-6). Properties already determined eligible for the National Register of Historic Places as contributing to a district include the Desert Theatre and the Elk's Club.



Figure 4.8-5 Hotel Indio in downtown.



Figure 4.8-6 Buildings along Fargo Street in downtown Indio.

Another district includes an area characterized mainly by residential buildings, extending from Indio Boulevard on the north, Oasis Street on the east, Requa Street on the south and Deglet Noor Street on the west. This neighborhood includes structures constructed mainly in the 1920s and 1930s. Old tourist court motels, currently used as single family residences (Figure 4.8-7), several apartment complexes and other wooden, adobe and stucco single family residences form the core of this potential district (Figure 4.8-8). Buildings reflect mainly the Bungalow and Spanish Colonial Revival styles. The district would include the Coachella Valley Museum and Cultural Center, formerly the home of Dr. Harry Smiley. Some commercial use is scattered through this area; however, overall, this potential district best reflects early residential buildings in Indio.



Figure 4.8-7 Old tourist court motel typical of 1920s to 1930s construction in Indio.



Figure 4.8-8 Adobe and stucco single-family residences typical of 1920s and 1930s construction in Indio.

Other buildings determined eligible for the National Register include the Astor Ranch and the Hopi House. Buildings of local historic interest include the County Fairground, with its Arabian Nights Pageant Stage (Figure 4.8-9) and other buildings with a Moorish flavor; the U.S. Date and Citrus Station; the Thomas Jefferson School and School District Building; and the FitzHenry Funeral Home, formerly the Methodist Church. A unique building type of local significance is the "submarine." A "submarine" was a one room building, designed by lay-over railroad crews, with a metal roof or coverings so that water could be piped over it. Some also had burlap coverings to spread and retain dampness, and keep the building cool in the desert heat (Nordland 1978:53).



Figure 4.8-9 Arabian Nights Pageant Stage at the County Fairgrounds in Indio.

Historic Resources Sensitivity Areas

Historic Archaeological Sites

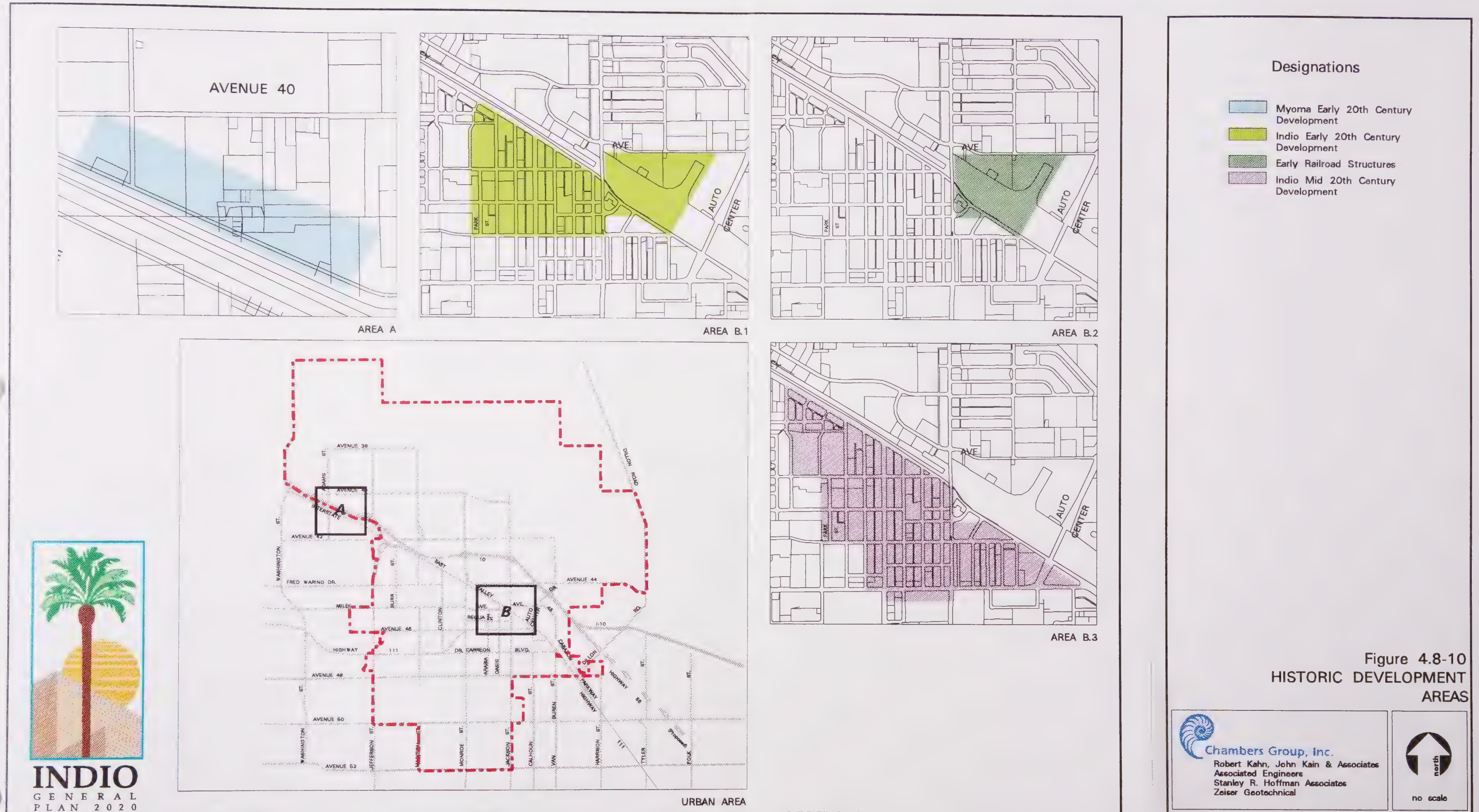
The following discussion of historic archaeological sites in the Indio area is based on very little data, because previous surveys have located only two sites. Therefore, the predictions of site locations are necessarily brief and tentative. It must be emphasized that any area not previously surveyed for archaeological resources must have a survey conducted to determine the actual occurrence of sites on a particular property or parcel.

Based on background research, historic archaeological sites with a high potential for significant remains would include the remains of late nineteenth and early twentieth century homesteads and ranches, as well as remains of Indio's early development as a town. The first site type relates to agricultural development as a significant part of Indio's past; the second illustrates the early development of a railroad desert town.

Previous surveys have not located these historic site types. The Del Webb survey (White 1990:8-9) located the remains of the Fleming Ranch (misidentified in the report as the Chuckwalla Ranch), but no significant archaeological remains were associated with the ranch. In fact, three ranches are located within this project area, as illustrated on the 1941 USGS Edom 15-minute quadrangle map.

The Del Webb survey does indicate that ranch remains are not obvious from surface survey; it is also possible that trash dump sites, not specifically related to individual ranches or homesteads, represent the only archaeological remains from this site type. Further archaeological investigation into this historic site type is required to evaluate the significance of ranch sites. Preliminary research, conducted with USGS 15-minute quadrangle maps of the 1940s, indicates the following sections have a high potential for homestead and/or ranch sites: Township 5 South, Range 7 East, Sections 10, 11, 12, 16, 25, 28, 33, 34; and Township 6 South, Range 7 East, Section 3.

The area with potential for archaeological sites relating to Indio's early development are mapped on Figure 4.8-10. Areas for potential listing for National Register are shown on Figure 4.8-11.



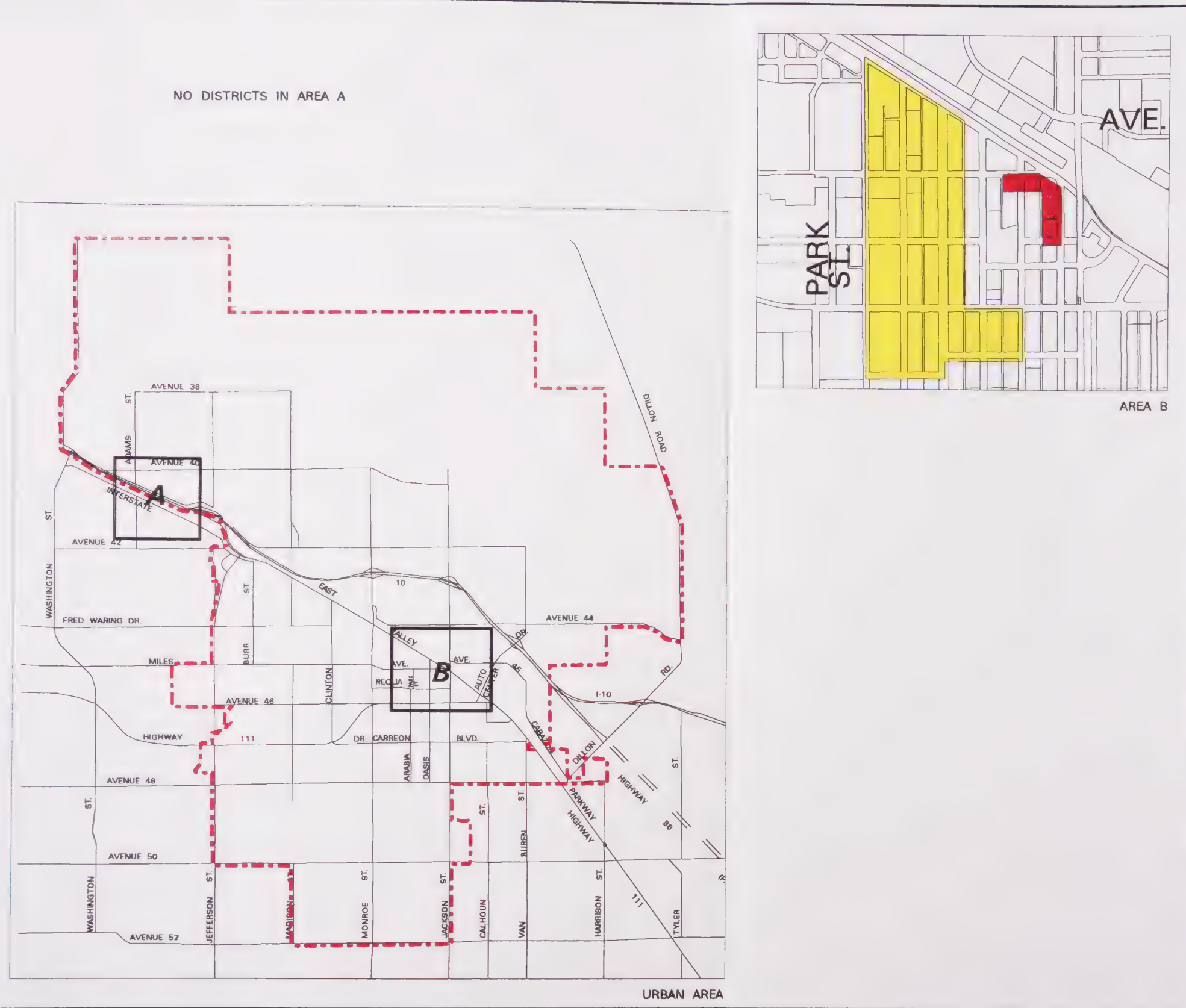



Figure 4.8-11
POTENTIAL HISTORIC DISTRICTS

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4.8.3 Paleontologic Resources

Paleontologic resources are recognized as nonrenewable resources significant to our culture, and are afforded protection by federal, state, and local environmental guidelines, such as the Federal Antiquities Act of 1906, and the CEQA of 1970. The following is a summary of a paleontologic resource report on the Planning Area prepared by the Earth Resources Department of the San Bernardino County Museum dated April 9, 1993.

Geologic formations are ranked by their potential to contain significant, nonrenewable paleontologic resources (SNPR). The categories are either HIGH, LOW, or UNDETERMINED.

- ▶ **High Potential.** Sedimentary units with high potential for containing significant nonrenewable paleontologic resources are rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. These units include, but are not limited to, sedimentary formations which contain SNPR anywhere within their geographical extent, and sedimentary rock units temporarily or lithologically suitable for the preservation of fossils.

High sensitivity includes not only the potential for yielding abundant vertebrate fossils, but also for production of a few significant fossils, large or small, vertebrate or invertebrate, that may provide new and significant taxonomic, phylogenetic, and/or stratigraphic data. Areas which may contain datable organic remains older than Recent, including *Neotoma* middens, and areas which may contain unique new vertebrate deposits, traces, and/or trackways are also considered to be significant.

- ▶ **Undetermined Potential.** Specific project areas underlain by sedimentary rock units about which literature and unpublished studies are not available have undetermined potential to contain SNPR. A field survey is to be performed by a qualified paleontologist to make a specific determination of high or low potential for containing SNPR, and to develop a program of mitigation as necessary.

- ▶ **Low Potential.** Following literature and records checks and/or field survey, areas may be determined by a qualified paleontologist to have low potential for containing SNPR subject to adverse impacts.

The Indio General Plan study area is located in the Coachella Valley, a structural basin which is the result of the San Andreas Fault system. Sedimentary deposition has been taking place in this basin since Miocene times (Proctor 1968).

Mapping by Rogers (1965) indicates the entire study area is located on late Cenozoic sediments ranging in age from mid Miocene to recent times. These sediments are divided into three units and are discussed below in ascending stratigraphic order.

The Indio Hills is a large anticlinal upwelling of the Coachella Valley sedimentary fill along the San Andreas fault zone (Dibblee 1954). The Indio Hills lie between the Mission Creek fault on the northeast and the Banning fault on the southwest. The activity of these two faults caused the sediments between them to warp. Within the study area these two faults converge. It is here where the Indio Hills sediments are the most folded and warped.

Within the study area, the Indio Hills contains four distinct sedimentary units (see Figure 4.8-12). These are discussed below.

Mecca Formation: Dibblee (1954) describes the Mecca Formation as a basal conglomerate of granitic and metamorphic debris, with the upper portion consisting of reddish clays and sandstone. It is considered to be late Miocene possibly earliest Pliocene in age. The Mecca Formation occurs within the study area on the southeastern end of the Indio Hills.

Records at the San Bernardino County Museum do not indicate any previous resource assessments from the Mecca Formation within the study area and, consequently, no resource localities are recorded in the County files. However, the clays and sandstone described by Dibblee (1954) are conducive to the preservation of fossils.

Dibblee (1954) also reports that the conglomerate portion of the Mecca Formation contains cobbles of sandstone with marine Eocene fossils. This is

important for determining sources of prehistoric terrains and rates of movement across branches of the San Andreas Fault. Mapped as Tm.

Sensitivity in Project Area: HIGH POTENTIAL.

Palm Spring Formation: The Palm Spring Formation consists of red to bluff arkosic sandstones and thin interbeds of reddish to greenish clays. In the southeastern Indio Hills, the formation is approximately 3,300 feet thick (Dibblee 1954).

In his description of the Palm Spring Formation, Rymer (1991) divides it into three units: lower, arkosic, and upper. He suggests a late Pliocene to early Pleistocene age for the lower unit based on magnetostratigraphy in the Indio and Mecca Hills. Proctor (1968) also suggest a mid-Pliocene age for the lowermost Indio Hills it conformably overlies the mid-Pliocene Imperial Formation.

Rymer (1991) reports a referral fossil cotton rat (*Sigmodon pre-hispidus*) from the lower part of the Palm Spring formation near the southeast end of the Indio Hills, indicating an Irvingtonian (early Pleistocene) Land Mammal Age.

The discovery by Frank Popenoe in 1958 of Upper Blancan (lowermost Pleistocene) horse remains from the Palm Spring Formation in the Indio Hills indicates that the formation probably spans the time from mid-Pliocene through early Pleistocene (Proctor 1968). Dr. Theodore Downs of the L.A. Cultural Museum (LACM) identified the horse remains as *Equus cf. Plesippus*.

Rymer (1989) suggest an early to mid-Pleistocene age of the upper unit of the Palm Spring Formation based on the fossil vertebrates and the presence of the Bishop Ash (.74-Ma).

A check at San Bernardino County Museum (SBCM) indicates previous resource assessments within the study area. SBCM Nos. 05.008.001, 05.008.003, and 05.008.005 are previous Rymer localities and have produced the remains of *Equus* sp. and Camelidae. Mapped as Tps.

Sensitivity in Project Area: HIGH POTENTIAL

Canebrake Conglomerate: Within the study area, the sandstones of the Palm Spring Formation grade northward into the Canebrake conglomerate facies

(Dibblee 1954). The Canebrake facies is a fanglomerate-conglomerate consisting of obscurely bedded, massive, ill-sorted, well indurated clasts (Proctor 1968).

The Canebrake conglomerate is believed to be middle Pliocene to Early Pleistocene in age. As with the Palm Spring Formation, west of the study area the Canebrake conglomerate conformably overlies the Imperial Formation. Proctor also reports that the uppermost Canebrake beds have produced mammalian, reptilian, and avian fossils (Downs 1957).

A records check at SBCM does not indicate resource localities on the Canebrake conglomerate. Mapped as Tc.

Sensitivity in Project Area: HIGH POTENTIAL

Ocotillo Conglomerate: The Ocotillo Conglomerate is a piedmont alluvial fan deposit of granitic and metamorphic debris derived from the mountains to the northeast (Dibblee 1954). In the Indio Hills the Ocotillo Conglomerate lies unconformable on the Canebrake, Palm Spring, and Imperial formations.

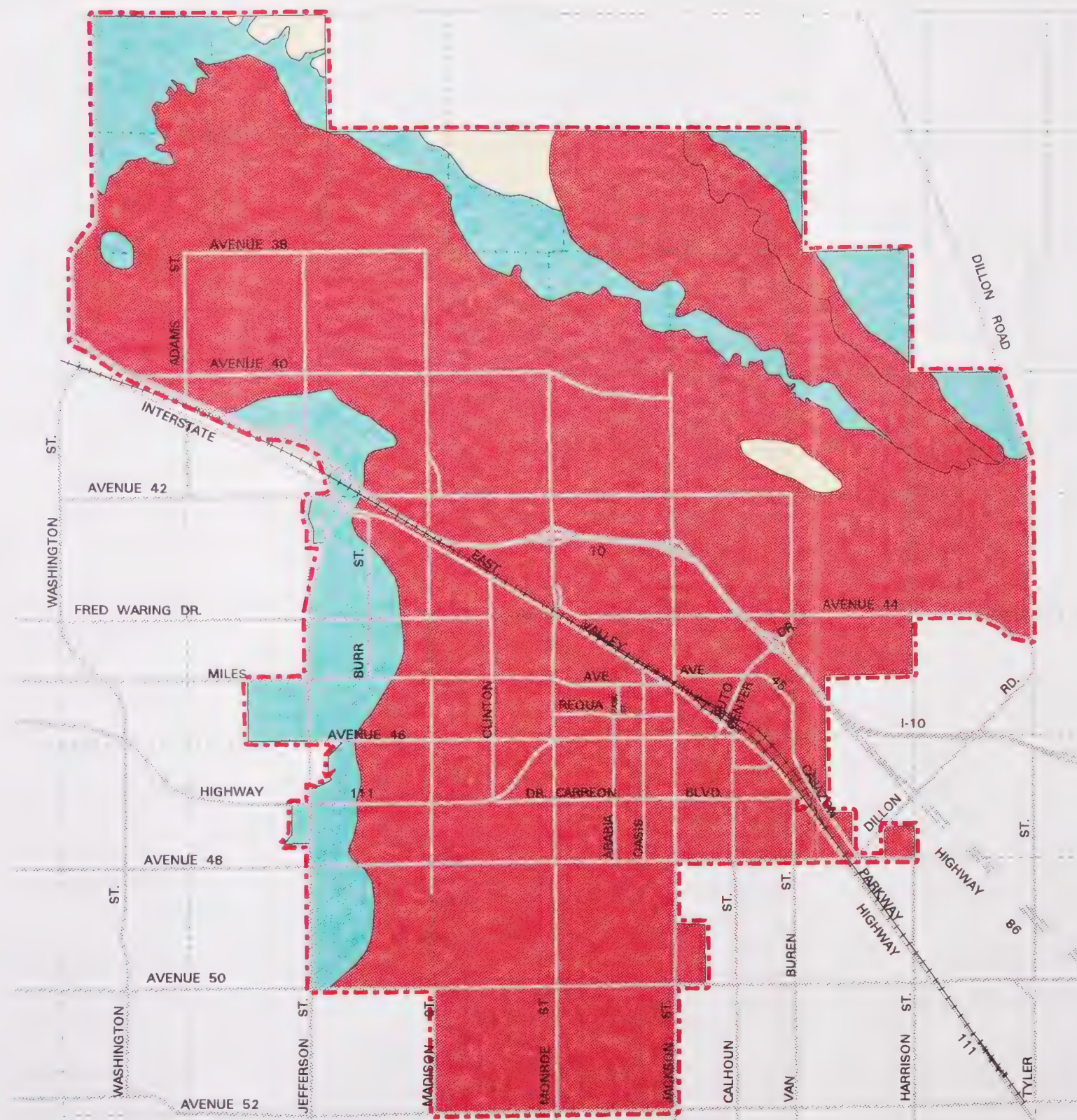
The Ocotillo Conglomerate is mid to late Pleistocene in age based on stratigraphic relations with the Upper Palm Spring Formation (Rymer 1991). Mapped as Qto.

Sensitivity in Project Area: UNDETERMINED POTENTIAL

Older Quaternary Lake Sediments

Mapped as late Pleistocene by Jennings (1967), these lacustrine deposits consist of sands, claystones, and beach gravels, and are found above the high shorelines of Lake Cahuilla. Rogers (1965) indicates these lacustrine deposits contain abundant fossil fresh water fauna.


The SBCM, under the direction of Robert Reynolds conducted a paleontologic monitoring survey along the eastern shore of the Salton Sea. Late Pleistocene lake sediments here produced a variety of fossil freshwater remains, including:



Sensitivity

- Low Potential
- High Potential
- Undetermined Potential

Figure 4.8-12
SENSITIVE PALEONTOLOGICAL
RESOURCES

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1" = 6000'



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<i>Anodonta</i> sp.	fresh water mussel
<i>S. striatinum</i>	fresh water clam
<i>Solen</i> sp.	razor calm
<i>Pyrgulopsis</i> sp.	fresh water snail
<i>Tryonia</i> sp.	fresh to brackish water snail
<i>Physa (Physella)</i> sp.	fresh water snail
Teleostei	bony fishes

(Reynolds 1989)

Additionally, John Minch & Associates conducted a survey within the study area at an elevation of approximately 120 feet above sea level. Near the surface they encountered the Quaternary Lake deposits, from which they recovered pelecypods and gastropods referable to the Lake Cahuilla sediments. Mapped as Ql.

Sensitivity to Project Area: HIGH POTENTIAL

Recent Alluvium and Windblown Sand

Recent stream channel and alluvial fan deposits of unconsolidated sands and gravels occur within the study area, as well as dunes of windblown sand. These modern deposits will not contain paleontologic resources. Mapped as Qa.

Sensitivity in Project Area: LOW POTENTIAL

PUBLIC HEALTH & SAFETY

5.1 NOISE

5.1.1 Fundamental Concepts of Environmental Acoustics

Noise can be defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Decibels and other technical terms are defined in Table 5.1-1.

Most of the sounds we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies that comprise a sound in accordance with a weighting that reflects the fact that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources that create a relatively steady background noise in which no particular source is identifiable. Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. The statistical noise descriptors L_{10} , L_{50} ,

and L_{90} are commonly used. They are the A-weighted noise levels equaled or exceeded during 10, 50, and 90 percent, respectively, of a stated time period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise period. The descriptors for the weighted 24-hour noise level are called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). For the CNEL descriptor, a 5-dBA penalty is added to the noise produced between 7:00 p.m. and 10:00 p.m., and a 10-dBA penalty is added to noise produced between the hours of 10:00 p.m. and 7:00 a.m. The L_{dn} is calculated in the same manner, but no penalty is added to the 7:00 to 10:00 p.m. noise. Both descriptors give roughly the same 24-hour average (within about 1 dB) with the CNEL being slightly more restrictive.

5.1.2 Human Health Noise Considerations

The effects of noise on people can be listed in three general categories:

- ▶ subjective effects of annoyance, nuisance, dissatisfaction;
- ▶ interference with activities such as speech, sleep, and learning; and
- ▶ physiological effects such as startling hearing loss.

The levels associated with environmental noise, in almost every case, produce effects only in the first two categories. Workers in facilities such as industrial plants can experience effects in the last category. Unfortunately, there is as yet no completely satisfactory way to measure the subjective effects of noise or of the corresponding

Table 5.1-1

DEFINITION OF TERMS RELATED TO NOISE**Noise Defined.**

Noise may be simply defined as unwanted sound. Basically, sound has two significant characteristics: pitch and loudness. In terms of affecting people, pitch is generally an annoyance. Pitch is the height or depth of a tone or sound.

Ambient Noise.

The level of noise that is all-encompassing within a given environment, being usually a composite of sounds from many and varied sources near to and far from the observer. No specific source is identified in the ambient.

A-Weighted Sound Pressure Level (dBA).

A method of sound measurement that assigns weighted values to selected frequency bands in an attempt to reflect electronically how the ear responds to sound. The A-Weighted Sound Pressure Level (dBA) is a quantity in decibels read from a standard sound level meter that is switched to the weighting network labeled "A." The "A" weighting network discriminates against lower frequencies according to a relationship approximating the auditory sensitivity of the human ear at moderate sound levels.

Day-Night Average Sound Level (Ldn).

A combination of daytime and nighttime "A" weighted noise levels with the nighttime values weighted further to account for the lower tolerance of people to noise during the nighttime period relative to daytime period. Ldn is approximately 1/2 dB lower than the estimated CNEL value and can be considered synonymous with CNEL.

Noise Attenuation.

The attenuation of a material substance or medium refers to its ability to reduce the noise level (acoustic) from one position to another. Noise attenuation can be specified, in decibels, as a noise transmission loss.

Noise Contours.

A line connecting equal levels of noise intensity as measured on a particular scale, such as Ldn.

Noise Impacted Area.

Area affected by unusually high levels of noise. Generally, a criterion level is stated in decibels that has been weighted for frequency and time (e.g. CNEL 65, Ldn 65).

Noise-Sensitive Land Uses.

The more sensitive land uses include residential, schools, libraries, churches, hospitals, auditoriums, and outdoor recreation areas. These typify land uses whose suitability is restricted by intrusive noise, hence are termed "noise sensitive." Noise sensitivity factors include interference with speech communication, subjective judgments of noise acceptability and relative noisiness, need for freedom from noise intrusion, and sleep interference criteria. Also considered are noise complaint history and compatible building construction.

Performance Standards, Noise.

Measured criteria for maximum emission of noise from a source. Noise performance standards for stationary land uses are usually applied at the lot line.

Effects of Noise.

Noise affects us all in varying ways depending principally on the loudness, frequency, periodicity, semantic content, or time of day. The effect of noise levels at 85 dB or more, one can predictably expect some sort of human stress reaction. Much of human reaction to unexpected noise and functions of the involuntary or automatic nervous system.

Physical effects connected to stress in general could include ulcers, indigestion, gastro-intestinal malfunctions, and heart disease. Noise can be interpreted as a factor in the increased rate of these conditions within most Americans.

Stress, aside from certain physical reactions, can be a factor in certain psychological problems. These problems develop when individuals are overwhelmed by the onslaught of stress.

Table 5.1-1

DEFINITION OF TERMS RELATED TO NOISE

Effects of Noise. (Continued)

While environmental noise alone probably does not produce mental illness, the continual bombardment of noise on an already depressed person cannot be helpful. Certainly it interferes with sleep, producing irritability and other tension. Definitive research has not been done in this area, but one 1969 study in England provided strong supporting evidence. Comparative studies of persons living adjacent to London's Heathrow Airport with others living in a quieter environment revealed that among those living in the noisy environment there was a significantly higher rate of admission to mental hospitals.

The following table gives approximate noise levels at which harmful effects begin to occur:

<u>Harmful Effect</u>	<u>Noise Level</u>
Hearing Loss	75-85 dB(A)
Extra auditory physiological effects	65-75 dB(A)
Speech interference	50-60 dB(A)
Interruption of sleep	35-45 dB(A)

Sleep Disturbance.

Noise can interfere with sleep by either awakening a person or causing a shift from a deep sleep level to a shallower level. Brief sounds of sufficient intensity and fluctuating noise levels above 35-45 dB have been shown to alter the sleep pattern to lighter sleep and hence poorer sleep. Research indicates that when people are exposed to a great deal of noise they will complain of sleep loss and suffer a reduction of their feeling of well being. Regular interruptions of sleep by noise may prove a health hazard both physically and mentally.

The EPA Task Group in considering the effects of noise on sleep has stated:

The maximum permissible outdoor level of $L_{dn} = 60$ dB, proposed (below) in order to limit people's annoyance due to noise, would provide average sound levels exterior noise sources below 35 dB at night in an average bedroom with closed windows. The levels in a bedroom with open windows could, of course, be higher but it is reasonable to expect people who open their windows at night to be able to accommodate to slightly higher levels.

Interference with Conversation.

Another detrimental effect of noise is to drown out sounds we want to hear, such as speech. When background noise exceeds 50-60 dB conversation is impaired.

The EPA Task Group mentioned above has also evaluated the effects of background noise on conversation. They have concluded:

That the outdoor day-night average sound level should not exceed 63 dB if people are to enjoy their normal domestic activities indoors or to converse without difficulty outdoors at a two meter distance (a common face-to-face distance for conversation.)

reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual past experiences with noise.

Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of the existing environment to which one has adapted. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers.

With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in determining impacts of increased noise levels.

- ▶ Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived.
- ▶ Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- ▶ A change in level of at least 5 dBA is required before any noticeable change in community response would be expected.
- ▶ A 10-dBA change is subjectively heard as approximately a doubling in loudness and would almost certainly cause an adverse change in community response.

5.1.3 Noise Standards and Land Use Criteria

Tolerance to noise varies by land use. Commercial and industrial uses are less affected by noise intrusion than are hospitals, schools, and residences. On a broader level, the amount of ambient noise in a community can affect whether the community is perceived as a desirable place to live, work, and play, or a stressful place. Because of this, noise/land use compatibility relationships are important factors to consider in planning and land use studies.

Land use and noise compatibility criteria have been developed from a number of sources including the California Office of Noise Control, Department of Housing and Urban Development, California General Plan Guidelines, and Riverside County General Plan.

In all of these rating systems, the community noise exposure level is compared to various land uses and is then defined as acceptable, unacceptable, or somewhere in between. Figure 5.1-1 shows the California Office of Noise Control Land Use Compatibility Matrix for Community Noise Exposure, which are believed representative for use in the City of Indio. The "normally acceptable" criteria are also generally consistent with the guidelines given in the City's existing Noise Element.

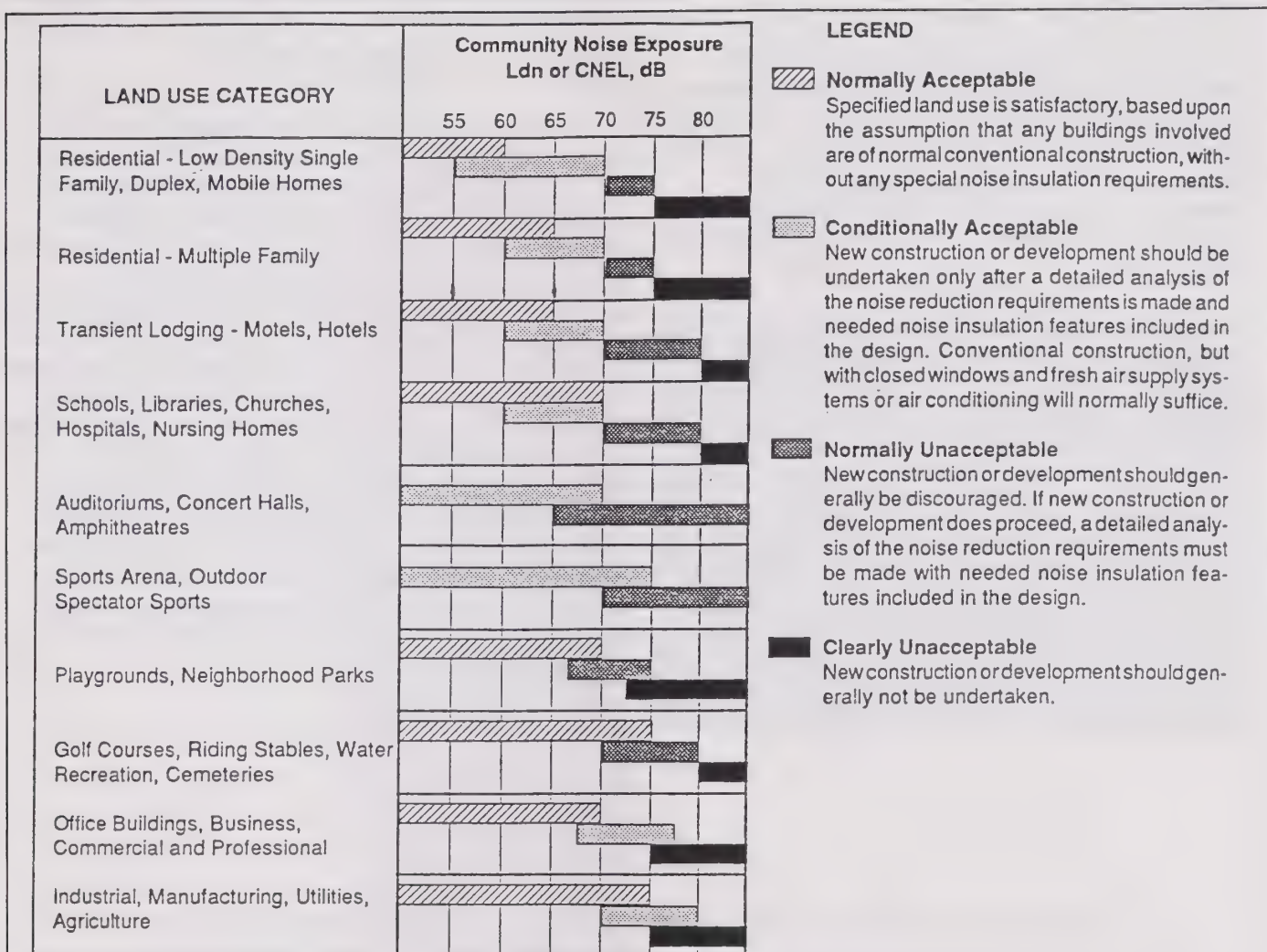
As shown on Figure 5.1-1, low-density residential uses are most sensitive to community noise with noise levels of 60 dBA CNEL and below considered "normally acceptable" (65 dBA CNEL for multifamily uses). For schools, churches, hospitals, and business and commercial areas, noise levels up to 70 dBA CNEL are "normally acceptable." For industrial, manufacturing, and utility uses, noise levels up to 75 dBA CNEL may be considered "normally acceptable."

In addition, some communities establish criteria for exterior environments. A common criterion is that the exterior area of dwellings in residential areas should not exceed 65 dBA CNEL. Exterior noise levels above 65 dBA CNEL begin to affect the usability of the space and make it difficult to achieve interior residential noise standards of 45 dBA CNEL without requiring fixed windows and full-time forced air ventilation.

5.1.4 Noise Sources

The Planning Area consists of relatively low-density urban development (within City limits) on a relatively flat landscape, surrounded by large expanses of open desert, undeveloped land, and agricultural land. In such settings, ambient noise levels tend to be low (40 to 50 dBA) in most areas. Within this setting, several sources, or uses, represent the primary noise-generating factors within the community. These primary sources include transportation facilities such as I-10, SR-111, and the Southern Pacific Railroad. Arterial roadways are also considered significant noise generators.

Other sources of noise in the Planning Area include aircraft flyovers from two local airports, Bermuda Dunes and Thermal, and machinery associated with agricultural and other industrial operations.



CONSIDERATIONS IN DETERMINATION OF NOISE-COMPATIBLE LAND USE

A. NORMALIZED NOISE EXPOSURE INFORMATION DESIRED

Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL or L_{dn} . Normalized values are obtained by adding or subtracting the constants as described in the Noise Adjustment Table to the measured or calculated value of CNEL or L_{dn} .

B. NOISE SOURCE CHARACTERISTICS

The land use-noise compatibility recommendations should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65 dB CNEL as the criterion which airports must eventually meet to protect existing noise. In order to facilitate the purposes of the Act, one of which is to encourage land uses compatible with the 65 dB CNEL criterion wherever

possible, and in order to facilitate the ability of airports to comply with the Act, residential uses located in Community Noise Exposure Areas greater than 65 dB should be discouraged and considered located within normally unacceptable areas.

C. SUITABLE INTERIOR ENVIRONMENTS

One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of L_{dn} . This requirement coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

D. ACCEPTABLE OUTDOOR ENVIRONMENTS

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

Figure 5.1-1

**CALIFORNIA OFFICE OF NOISE CONTROL LAND USE
COMPATIBILITY MATRIX FOR COMMUNITY NOISE EXPOSURE**

Appendix E provides calculated noise contour distances for existing traffic on the existing arterial roadways in the Planning Area. The results of these calculations are displayed on Figure 5.1-2. In most cases, the 70-dBA contour remains within the roadway right-of-way. The only major exception to this is the I-10 Freeway and the railroad along East Valley Parkway.

INDIO FACTS: *The largest noise generators in the City are all transportation oriented: the railroad, airport, I-10 Freeway, Highway 111, and major arterials.*

5.1.5 Railroad Noise

Personal communication with Richard Peterson, Safety Officer with the Southern Pacific Railroad (July 30, 1992) revealed that two parallel lines are located adjacent to Indio Boulevard. Operations along these lines average 36 to 40 on a daily basis. The estimated speed through the area is approximately 45 to 55 mph. A typical train is about 5,000 feet in length (80 cars) and is pulled by four engines. The rails are welded and there are several grade crossings that require the whistle to be sounded. Finally, the ratio of day to night operations is about 50:50. This information was used to ascertain the noise generated by rail operations. Using the methodology provided by "The Noise Guidebook" published by the U.S. Department of Housing and Urban Development and assuming 38 trains each with four engines and an average speed of 50 mph, the results of these operations are presented in Table 5.1-2.

Table 5.1-2

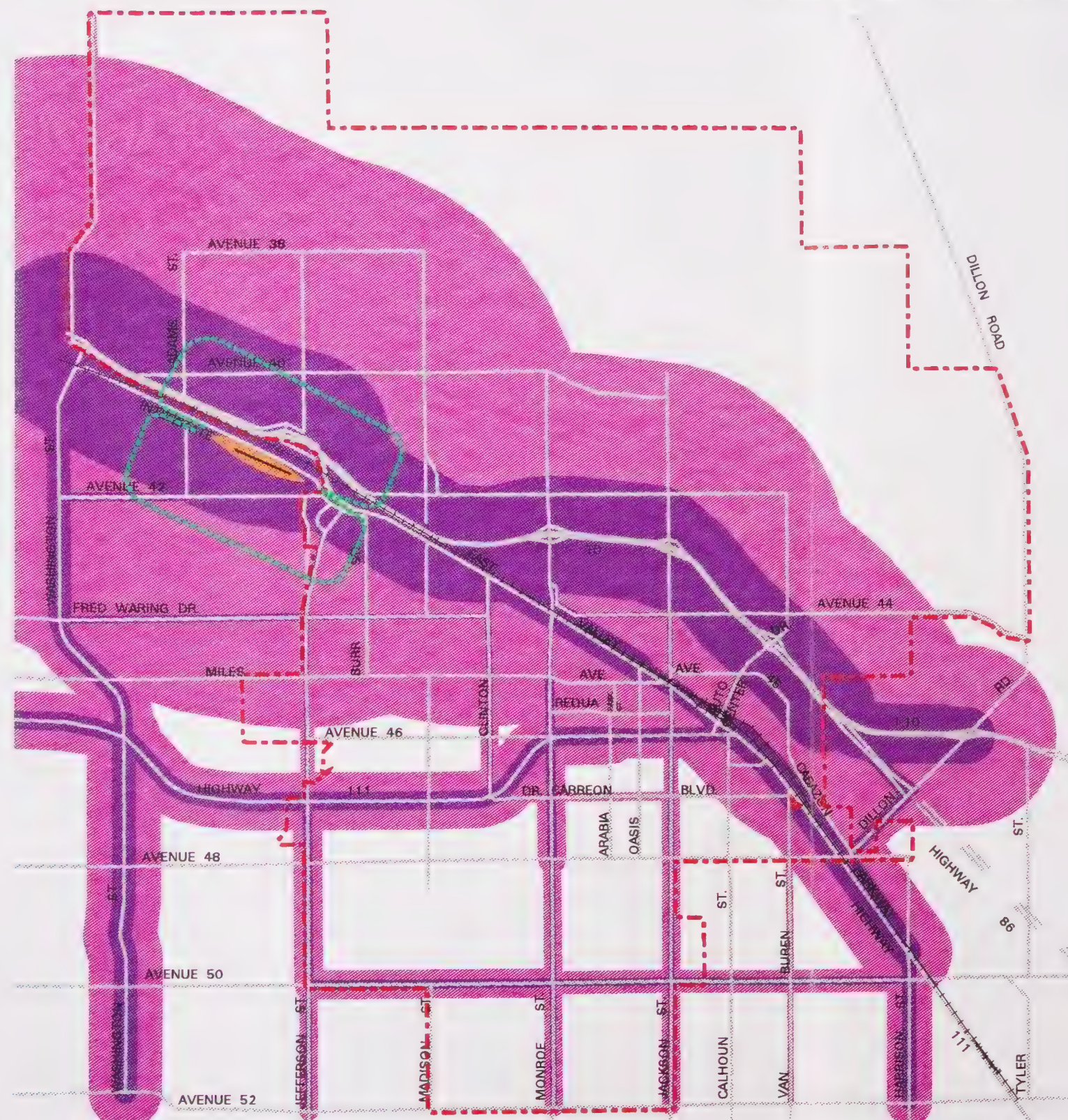
NOISE GENERATED BY THE SOUTHERN PACIFIC RAILROAD THROUGH INDIO¹

Near Grade Crossing	Approx. Distance to 75 dBA Ldn	Approx. Distance to 70 dBA Ldn	Approx. Distance to 65 dBA Ldn	Approx. Distance to 60 dBA Ldn
Yes	400'	900'	1,900'	4,000'
No	105'	220'	480'	1,050'

¹ As based on methodology presented in "The Noise Guidebook, U.S. Department of Housing and Urban Development, 1985.



INDIO
GENERAL
PLAN 2020



Noise Factors





-  Extent of Airport
60 CNEL Noise Area
-  Extent of Traffic
60 CNEL Noise Area
-  Extent of Traffic
65 CNEL Noise Area
-  Idealized Flight Pattern

Figure 5.1-2
AIRPORT AND TRAFFIC NOISE



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

5.2 AIR QUALITY

5.2.1 Air Quality Regulatory Framework

Agency with Jurisdiction

The City of Indio and Planning Area lie within the South East Desert Air Basin (SEDAB). The SEDAB covers the large desert portions of San Bernardino, Riverside, Kern, Imperial, and Los Angeles Counties. Portions of the SEDAB, including the Coachella Valley, are under the authority of the South Coast Air Quality Management District (SCAQMD); thus, the Air Quality Management Plan (AQMD) for the South Coast Air Basin (1991 AQMP) is applicable to the Planning Area. The SCAQMD works with other regional and local governments to reduce air pollutant emissions through regulation of the various sources. For example, the SCAQMD works with the CVAG to implement the Coachella Valley PM₁₀ Plan. CVAG then works with local governments in a coordinating and monitoring role to implement suspended particulate matter (PM₁₀) measures.

The Clean Air Act

The Clean Air Act of 1971 (as amended) established national Ambient Air Quality Standards (AAQS) with states retaining the option to adopt more stringent standards or to include other pollution species. Because California already had standards in existence before federal AAQS were established, and because of unique meteorological problems in the state, there is considerable diversity between state and federal standards currently in effect in California. The present federal and state ambient air quality standards are shown in Table 5.2-1. The last possible attainment deadline of December 31, 1987 passed with the South Coast Air Basin (SCAB) still far from attainment. A new air quality plan was adopted on March 17, 1989, with a more realistic long-term attainment schedule covering the next 20 years for air quality problem areas such as southern California. This Plan has already been superseded by a 1991 AQMP adopted on July 12, 1991.

The 1991 Air Quality Management Plan

The AQMP, governed by state and federal laws, has the goal of achieving healthful levels of air quality. The 1991 AQMP differs from the 1989 AQMP in several ways. In addition, the 1991 plan provides for stricter controls over emissions from industrial sources, sets standards for clean burning motor fuels, identifies a wide range of air toxics to be regulated, and establishes policy to limit the use of ozone depleting gases (so-called greenhouse gases). The biggest change is in the Growth Management Measure, which has been revised to focus on the reduction of vehicle miles traveled rather than the previous jobs/housing balance performance goals. Other changes include implementation of the following measures:

- ▶ extensive use of clean fuels,
- ▶ rapid introduction of clean vehicles,
- ▶ conserving natural gas and electricity,
- ▶ reducing emissions from all sources, and
- ▶ reducing vehicle miles traveled and trips taken.

SCAQMD adopted the 1991 AQMP on July 12, 1991. The goal of this Plan is to reach federal attainment for carbon monoxide (CO), nitrogen dioxide (NO₂), PM₁₀, and ozone in the years 2000, 2000, 2006, and 2010, respectively. The state standards for attainment differ from the federal standards with anticipated attainment for CO by 2005, NO₂ in 2000, and PM₁₀ and ozone past 2000.

Within the Final 1991 AQMP is a list of strategies designed to improve the air quality throughout the region. These measures examine long-range solutions to area-wide air quality concerns. Measures within the AQMP are divided into three classifications, including Tier I (present technology), Tier II (advanced technology), and Tier III (new technology). Control measures within each tier are grouped into several categories all intended to reduce emissions from specific sources or activities. These categories include stationary point sources, transportation-related and land-use related sources, indirect sources, stationary area sources, mobile sources, and offroad mobile sources. With relation to the most projects, land use strategies focus on the land use measures that could reduce the number

Table 5.2-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone	1 Hour	>0.09 ppm (180 ug/m³)	Ultraviolet Photometry	>0.12 ppm (235 ug/m³)	Same as Primary Std.	Ethylene Chemiluminescence
Carbon Monoxide	8 Hour	>9.1 ppm (10 mg/m³)	Nondispersive Infrared Spectroscopy (NDIR)	≥9.5 ppm (10 mg/m³)	Same as Primary Stds.	Nondispersive Infrared Spectroscopy (NDIR)
	1 Hour	>20 ppm (23 mg/m³)		>35 ppm (40 mg/m³)		
Nitrogen Dioxide	Annual Average	-	Gas Phase Chemilumi- nescence	>0.0534 ppm (100 ug/m³)	Same as Primary Std.	Gas Phase Chemiluminescence
	1 Hour	>0.25 ppm (470 ug/m³)		-		
Sulfur Dioxide	Annual Average	-	Ultraviolet Fluorescence	0.03 ppm (80 ug/m³)	-	Pararosoaniline
	24 Hour	0.05 ppm (131 ug/m³)		0.14 ppm (365 ug/m³)	-	
Suspended Particulate Matter (PM-10)	Annual Geometric Mean	30 ug/m³	Size Selective Inlet High Volume Sampler and Gravimetric Analysis	-	-	-
	24 Hour	>50 ug/m³	-	>150 ug/m³	Same as Primary Stds.	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	-		>50 ug/m³		
Sulfates	24 Hour	≥25 ug/m³	Turbidimetric Barium Sulfate	-	-	-
Lead	30-Day Average	≥1.5 ug/m³	Atomic Absorption	-	-	Atomic Absorption
	Calendar Quarter	-		≥1.5 ug/m³	Same as Primary Std.	
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70 percent		-	-	-

* Prepared in accordance with applicable SCAQMD Air Quality Data Cards and ARB Fact Sheet 38 (revised 7/88).

and length of automobile and haul truck trips made, with the underlying assumption that vehicle trips and the mode of transportation of choice are not only a function of the transportation system, but also factors such as the relative location of land uses, and the way in which these land uses relate to the transportation system. Tier I Control Measures for transportation-related and land-use related sources include alternative work schedules, telecommunications, employer rideshare and mass transit incentives, parking management, vanpool vehicle purchase incentives, high-occupancy vehicle lanes, transit improvements, growth management, truck controls, traffic flow improvements, and nonmotorized transportation methods. These Tier I measures are currently being implemented by SCAQMD (e.g., Regulation XV ridesharing requirements).

- ▶ removing accumulated dirt from streets,
- ▶ treating unpaved roads with chemical stabilizers,
- ▶ covering loaded trucks, and
- ▶ prohibiting construction grading on windy days.

According to the SEDAB SIP, incorporation of these measures in projects by local governments, the SCAQMD, and CVAG is expected to allow attainment of the federal PM_{10} standard by the year 1995.

INDIO FACTS: *Indio has adopted and is implementing a PM_{10} Plan.*

State Implementation Plan for PM_{10} in the Coachella Valley

Air quality monitoring data from stations in the Coachella Valley show that ozone and PM_{10} standards are regularly exceeded. While the ozone problem can be attributed to import from the SCAB, PM_{10} is primarily generated from local sources. According to the plan, five major source categories account for the majority of PM_{10} emissions in the area: open area erosion, agricultural operations, paved roads, unpaved roads, and construction/demolition activities.

The SCAQMD governing board in 1989, adopted, "The State Implementation Plan for PM_{10} for the portion of the SEDAB known as the Coachella Valley" (SEDAB SIP). The plan calls for implementation of a number of particulate control measures aimed at reducing manmade sources. Natural phenomena, such as significant blowsand events, are not specifically targeted for control, except that measures can be implemented to minimize the effect on urban areas. The SIP PM_{10} control measures include the following:

- ▶ using soil stabilizers to treat areas adjacent to roadways,
- ▶ erecting snow-fence windbreaks,
- ▶ planting vegetative and tree windbreaks,

Riverside County General Plan - Air Quality Element

The County of Riverside is in the process of reviewing and adopting an air quality element to the County General Plan. Initially ready for consideration in 1990, the plan has been withheld pending modifications required as a result of the 1991 Clean Air Act amendments. The draft plan's focus is on promulgating and implementing control strategies for primary pollutants, particularly through land use and transportation measures. The plan was adopted by the Board of Supervisors in the late summer of 1992.

5.2.2 Meteorology/Climate

The Coachella Valley is defined by mountain ranges lying to the west (San Jacinto and Santa Rosa) and north (San Bernardino). The SEDAB is physically separate from the SCAB; however, the San Gorgonio pass provides a vehicle by which air flows from SCAB, and pollutants enter the Coachella Valley. Inversion conditions that characteristically occur in the SCAB are less pronounced in SEDAB. Nonetheless, conditions favorable to creation of inversions are prevalent at night during most times of the year and during winter, extend into the day.

The climate of the Coachella Valley is arid with rainfall averaging less than 3 inches per year, based on a 39-year history at the Thermal Climatological station (Psomas and Associates 1989). The measurable precipitation typically occurs between October and January (90 percent). Daily temperature extremes are quite wide in this arid climate. July average daily temperatures are sometimes in the low 90s with cool average temperatures in the mid-50s during January. Extremes from 25 to 125°F have been recorded in the valley.

The Coachella Valley is subject to the overall southern California wind regimes that seasonally affect climate and air quality. The predominant daytime wind pattern is from the west, with speed greater in summer months. At night, the predominant flow is reversed, although drainage winds may have localized effects on wind pattern. In fall and winter months, surface high-pressure systems over the Great Basin, combined with other meteorological conditions, can result in very strong, downslope, northeasterly Santa Ana winds. These strong winds normally have a duration of a few days before predominant meteorological conditions are reestablished. In addition, the valley experiences limited periods of humid weather associated with tropical air masses and thunderstorms from the southeast.

5.2.3 Existing Air Quality

Ozone and particulates are the major air quality problems in the SEDAB. Tables 5.2-2 and 5.2-3 provide existing monitoring data for the Coachella Valley from the Indio and Palm Springs monitoring stations. The Coachella Valley is in attainment with federal and state ambient air quality standards with the exception of ozone and PM₁₀.

Ozone at the Indio station exceeded the state 1-hour standard (10 parts per million [ppm]) on 11.7 percent of the days monitored from 1987 to 1991, and the federal standard on less than 3 percent of the days. However, ozone has not exceeded the criteria for first-stage episodes; the highest concentration during the monitoring years was 0.18 ppm.

In the Coachella Valley, the ozone standard is exceeded due to wind transport from the SCAB and is not attributable to activities within the SEDAB. The

**INDIO
FACTS:** *Ozone and particulates are the major sources of air quality problems in Indio.*

mechanism by which this occurs involves the movement of the air mass across the SCAB on westerly winds. As the pollutant-laden air undergoes photochemical reactions and moves inland, the ozone concentration increases. The same air mass that gives western Riverside some of the worst air quality in the nation enters the Coachella Valley through the San Gorgonio pass. Control of ozone concentrations in the valley, therefore, is tied to attainment activities to control pollutant sources in the SCAB.

For the period from January 1987 through December 1991, PM₁₀ samples at the Indio monitoring station exceeded the federal 24-hour standard of 150 micrograms per cubic meter on fewer than 4 percent of the days measured. The highest number of excessive measurements occurred in the years 1989 and 1991 with four violations in each year. The federal annual standard, an arithmetic average of 50 micrograms per cubic meter, has been exceeded in each of the past year monitoring years. The California 24-hour standard of 50 micrograms per cubic meter was exceeded on 55 percent of the days monitored between 1987 and 1991. The California annual standard for PM₁₀ is 30 micrograms per cubic meter, annual geometric mean, and has been exceeded in all five of the monitoring years examined.

5.2.4 Blowsand Hazards

Blowsand, or wind-induced soil erosion, is prevalent in the Coachella Valley and represents an ongoing geologic process. This type of erosion occurs when sandy soils, in the absence of moisture, are exposed to high winds. Natural features such as alluvial fans, dry stream courses, and sandstone cliffs are susceptible to wind erosion. Altering the soil profile such as occurs during agriculture, construction, devegetation, or off-road vehicle use can also create conditions that facilitate wind-induced soil erosion.

Table 5.2-2

PALMS SPRINGS AIR QUALITY MONITORING SUMMARY -- 1987-1991
(days standards were exceeded and maximum observed levels)

Pollutant/Standard	1987	1988	1989	1990	1991
Ozone					
1-Hour \geq 0.10 ppm State	74	99	108	73	48
1-Hour $>$ 0.12 ppm Federal	33	35	37	27	13
Max. 1-Hour Conc. (ppm)	0.17	0.20	0.19	0.17	0.18
Carbon Monoxide					
1-Hour $>$ 20 ppm	0	0	0	0	0
8-Hour $>$ 9.1 ppm	0	0	1	0	0
Max 1-Hour Conc. (ppm)	5	5	5	6	4
Max. 8-Hour Conc. (ppm)	2.9	2.5	2.3	2.9	2.1
Nitrogen Dioxide					
1-Hour $>$ 0.25 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.08	0.11	0.09	0.09	0.09
Total Suspended Particulates					
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	180	145	768	170*	NM
Annual Geometric Mean ($\mu\text{g}/\text{m}^3$)	58.8	56.6	69.6	57.4*	NM
Particulate Sulfate					
24-Hour $>$ 25 $\mu\text{g}/\text{m}^3$	0	0	0*	0*	NM
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	10.4	11.2	12.1*	5.6*	NM
Respirable Particulates (PM_{10})					
24-Hour $>$ 50 $\mu\text{g}/\text{m}^3$ State	5/20*	0/8	17/60	9/59	14/56
24-Hour $>$ 150 $\mu\text{g}/\text{m}^3$ Federal	0/20*	0/60	2/60	0/59	1/56
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	121	77	292	83	197

* Less than 12 full months of data; monitoring discontinued.

NM = Not Monitored

Source: SCAQMD - Palm Springs Air Monitoring Station Data Summaries

Table 5.2-3

CITY OF INDIO AIR QUALITY MONITORING SUMMARY -- 1987-1991
(days standards were exceeded and maximum observed levels)

Pollutant/Standard	1987	1988	1989	1990	1991
Ozone					
1-Hour ≥ 0.10 ppm State	41	1	76	47	48
1-Hour > 0.12 ppm Federal	14	0	16	10	13
Max. 1-Hour Conc. (ppm)	0.16	0.11	0.16	0.16	0.18
Total Suspended Particulates					
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	331	309	146.5	148.5	NM
Annual Geometric Mean ($\mu\text{g}/\text{m}^3$)	100.6	101.1	136.5	130.5*	NM
Particulate Sulfate					
24-Hour $> 25 \mu\text{g}/\text{m}^3$	0	0	0	0*	NM
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	10.3	8.4	18.3	7.0*	NM
Respirable Particulates (PM_{10})					
24-Hour $> 50 \mu\text{g}/\text{m}^3$ State	25/61	22/61	39/53	41/59	37/59
24-Hour $> 150 \mu\text{g}/\text{m}^3$ Federal	0/61	0/61	4/58	4/59	3/59
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	115	115	712	520	340

* Less than 12 full months of data.

NM = Not Monitored

Source: SCAQMD - Annual Quality Data Summaries

Blowsand differs from fugitive dust and PM_{10} in that blowsand contains fugitive dust, PM_{10} , and sand particles. The only particulate regulated by AQMD is PM_{10} . The Riverside County Comprehensive General Plan has designated most of Indio and areas to the northwest of the Planning Area as a "Blowsand Hazard Zone." Within this area, an "Active Blowsand Zone" has also been defined, which roughly includes the northwestern Indio and the Shadow Hills areas. The approximate limits of the Blowsand Hazard Zone are shown on Figure 5.2-1. According to the USDA-SCS, small portions of the Planning Area along State Highway 111 and Indio Boulevard west of Madison Street have "Very Severe Wind Erosion Hazard." The remaining portion of Indio mapped by the USDA-SCS is classified as having a "Moderate Wind Erosion Hazard." These areas are shown on Figure 5.2-1.

The County of Riverside implements control measures for blowsand and wind erosion. Within the designated Blowsand Hazard Zone, or any other area subject to blowsand or wind erosion, applications for grading permits shall include a wind erosion control plan. Suggested measures for alleviating blowsand impacts include windbreaks, walls, fences, vegetative ground covers, rock, other stabilizing materials, and provision of irrigation.

It is noted that the Coachella Valley fringe-toed lizard is adapted to areas of windblown sand. The designated habitat area of this species is discussed in the biology section. Soil stabilization in habitat areas is detrimental to the species.

5.2.5 Air Pollutant Constituents and Public Health Hazards

The following paragraphs describe the primary pollutants, their sources, and physiological effects. As stated above, the pollutants of concern in the Coachella Valley are ozone (photochemical oxidants) and PM_{10} .

Photochemical Oxidant

The term "photochemical oxidant (O_x)" can include several different pollutants, but consists primarily of ozone (more than 90 percent) and a group of

chemicals called organic peroxy nitrates. O_x is created in the atmosphere rather than emitted directly into the air. Reactive organic gases, including hydrocarbons, and oxides of nitrogen are the emitted contaminants that participate in the reaction. Ozone is a pungent, colorless toxic gas produced by the photochemical process. Photochemical oxidant is a characteristic of southern California-type smog and reaches its highest concentrations during the summer and early fall.

Sources. Photochemical smog is caused by complex atmospheric reactions involving oxides of nitrogen and reactive organic gases with ultraviolet energy from the sun. Motor vehicles are the major source of oxides of nitrogen and reactive organic gases.

Effects. The common manifestations of oxidants are damage to vegetation and cracking of untreated rubber. Photochemical oxidants in high concentrations can also directly affect the lungs, causing respiratory irritation and possible changes in lung functions.

Oxides of Nitrogen

There are a number of oxides of nitrogen (NO_x), but only two are important in air pollution: nitric oxide (NO), a colorless, odorless gas formed under atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure; and NO_2 , a reddish-brown irritating gas formed by the combustion of NO with oxygen.

Sources. High combustion temperatures cause nitrogen and oxygen to combine and form NO. Further reaction produces additional oxides of nitrogen. Combustion in motor vehicle engines, power plants, refineries, and other industrial operations are the primary sources in the region. Ships, railroads, and aircraft are other significant sources.

Effects. NO_x is a direct participant in photochemical smog reactions. The emitted compound, NO, combines with oxygen in the atmosphere in the presence of hydrocarbons and sunlight to

form NO_2 and ozone. NO_2 , the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppm on days of 10-mile visibility. NO_x is an important air pollutant in the region because it is a primary receptor of ultraviolet light that initiates the reactions producing photochemical smog. It will also react in the air to form nitrate particulates.

Hydrocarbons and Other Organic Gases

Any of the vast family of compounds consisting of hydrogen and carbon in various combinations are known as hydrocarbons. Fossil fuels are included in this group. Many hydrocarbon compounds are major air pollutants, and those that can be classified as olefins or aromatics are highly photochemically reactive. Atmospheric hydrocarbon concentrations are generally higher in winter because the reactive hydrocarbons react more slowly in the winter and meteorological conditions are more favorable to their accumulating in the atmosphere to higher concentrations before producing O_3 .

Sources. Motor vehicles are the major source of reactive hydrocarbons in the Basin. Other sources include evaporation of organic solvents and petroleum refining and marketing operations.

Effects. Certain hydrocarbons can damage plants by inhibiting growth and causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions that produce O_3 .

Particulates

Atmospheric particulates are made up of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. About 90 percent by weight of the emitted particles are larger than 10 microns in diameter, but about 90 percent of the total number of particulates are less than 5 microns in diameter (PM_{10}). The aerosols formed in the atmosphere,

primarily sulfate and nitrate, are usually smaller than 1 micron. In areas close to major sources, particulate concentrations are generally higher in the winter, when more fuel is burned, and meteorological conditions favor the buildup of directly emitted contaminants. However, in areas remote from major sources and subject to photochemical smog, particulate concentrations are higher during summer months.

Sources. Particulate matter consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, combustion, and atmospheric photochemical reactions. Natural activities also put particulates into the atmosphere; wind-raised dust and ocean spray are two such sources of particulates.

Effects. In the respiratory tract, very small particles of certain substances may produce injury by themselves, or may contain adsorbed gases that are injurious. Suspended in the air, particulates of aerosol size can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

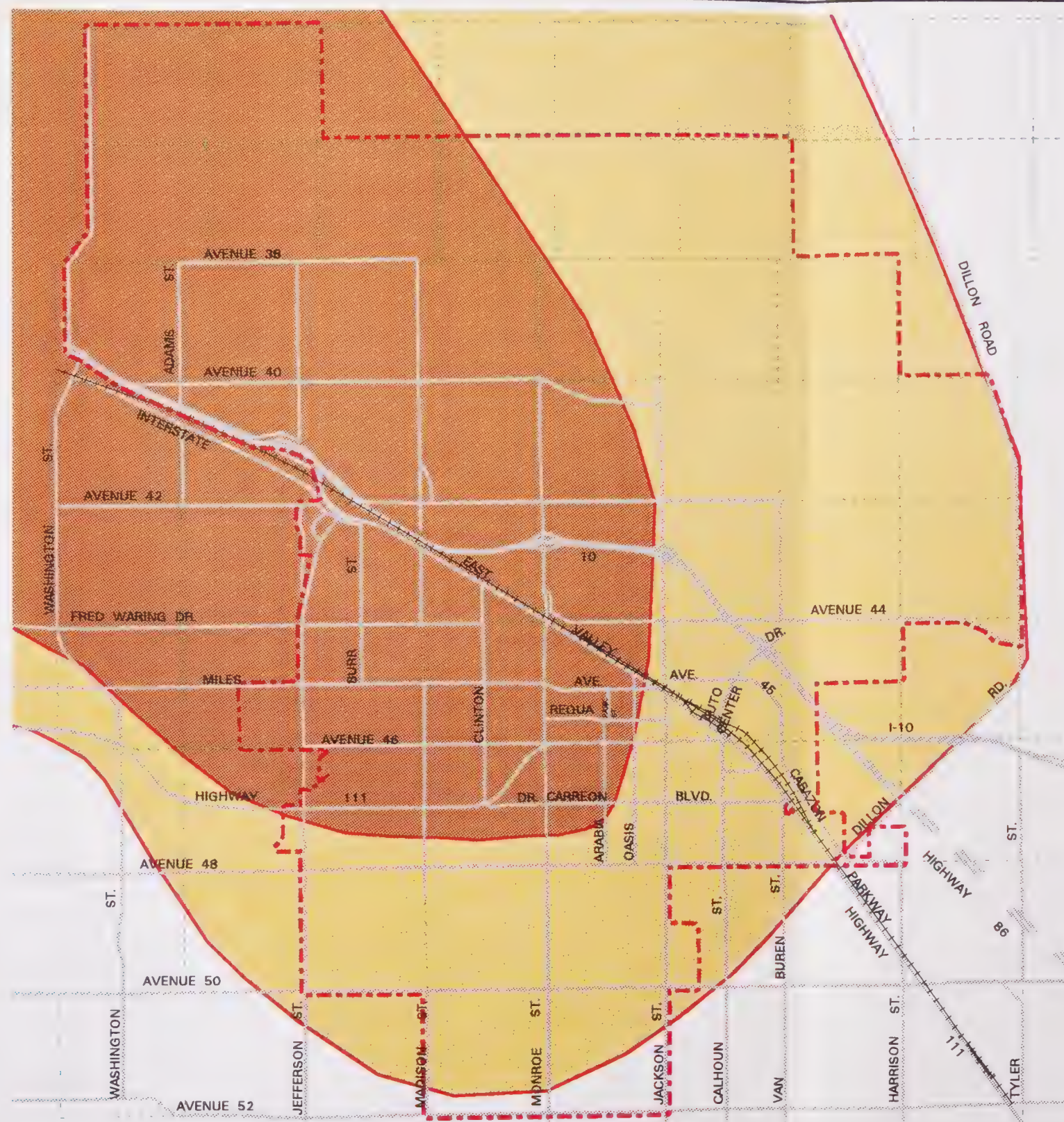
Carbon Monoxide

Carbon monoxide is a colorless, odorless toxic gas produced by the incomplete combustion of carbon-containing substances. CO concentrations are generally higher in the winter when meteorological conditions favor the buildup of directly emitted contaminants. School and health warnings and alerts based on CO occur almost entirely in the winter.

Sources. Internal combustion engines, primarily in automobiles, contribute CO due to incomplete fuel combustion. Various industrial processes also produce CO emissions through incomplete combustion. However, gasoline-powered motor vehicles are the major source of CO in the Basin.



INDIO
GENERAL
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Blowsand Zones

- Active Blowsand Zone
- Blowsand Hazard Zone

Derived from CVAG
Blowsand Control and
Protection Plan, June 1977

Figure 5.2-1
BLOWSAND HAZARD

 **Chambers Group, Inc.**
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical


1" = 6000'

Effects. CO does not irritate the respiratory tract, but passes through the lungs directly into the blood stream, and by interfering with the transfer of oxygen deprives the body of oxygen. CO is not known to have adverse effects on vegetation, visibility, or materials.

Sulfur Dioxide

Sulfur dioxide (SO₂) is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. In humid atmospheres, some of the SO₂ may be converted to sulfur trioxide and sulfuric acid mist, with some of the latter eventually reacting with other materials to produce sulfate particulates.

Sources. This contaminant is the natural combustion product of sulfur or sulfur-containing fuels. Fuel combustion is the major source, while chemical plants, sulfur recovery plants, and metal processing are minor contributors. SO₂ levels tend to be higher in the winter. Decreasing levels of SO₂ reflect the effect of the use of natural gas in power plants and boilers. Natural gas is very low in sulfur, while low sulfur fuel oil is rapidly being substituted for high sulfur fuel oils.

Effects. At sufficiently high concentrations, SO₂ irritates the upper respiratory tract. At lower concentrations, when in combustion with particulates, SO₂ appears to do greater harm by injuring lung tissues. Sulfur oxides, in combination with moisture and oxygen, can yellow the leaves on plants, dissolve marble, and erode iron and steel. Sulfur oxides can also react to produce sulfates that reduce visibility and cut down the light from the sun.

vehicular traffic on I-10 through the Planning Area. Other important sources include railroad activities and stationary sources associated with local industry. Agricultural activities involve use of hazardous chemicals that can be transported by air. Blowsand is also an important source of particulate emissions as described above.

5.2.7 Sensitive Receptors in Planning Area

The AQMD identifies sensitive receptors as populations that are more susceptible to the effects of air pollution than are the general population. Sensitive receptors, located in or near the vicinity of known air emission sources, including freeways and intersections, are of particular concern.

Sensitive receptors include the following populations or uses:

- ▶ long-term health care facilities,
- ▶ rehabilitation centers,
- ▶ convalescent centers,
- ▶ retirement homes,
- ▶ residences,
- ▶ schools,
- ▶ playgrounds,
- ▶ child care centers, and
- ▶ athletic facilities.

Land use compatibility issues relative to siting of pollution-emitting uses or siting of sensitive receptors must be considered. In the case of schools, state law requires that siting decisions consider potential for toxic or harmful air emissions in the surrounding area.

5.2.6 Air Pollution Sources in Planning Area

The City of Indio contains both stationary and mobile sources of air pollutant emissions. The most significant local source of gaseous air emissions is

5.3 POLICE AND FIRE SERVICES

5.3.1 Police

Police protection for the City is provided by the Indio Police Department located at 46-800 South Jackson Street (see Figure 5.3-1). According to Police Chief Jerry Graves, the police force personnel currently includes 52 sworn officers and 21 nonsworn (civilian) employees. Police vehicles include 13 marked units, 6 detective units, 4 administrative cars, and 1 special weapons and tactics (SWAT) van.

Due to budget cuts, the Police Department lost 12 employees in 1991 including nine officers, two dispatchers, and one community service officer. Concurrently, demand for police response is increasing in the City, and additional officers are needed to service current development projects, placing even more demand on the existing police services.

To provide police services, the Police Department divides the City into five geographical beats. For any given 24-hour period, each beat requires approximately 5.9 officers.

The present ratio of police officers to population in the City of Indio is 1.36 officers per 1,000 residents (based on a 1991 population of 38,124). The desired ratio of police officers to population within the City depends on two criteria. First, the City of Indio uses the general desirable ratio of 1.5 officers per 1,000 residents. However, this figure is somewhat misleading because different jurisdictions have different topography, population demographics, income levels, and other characteristics.

Therefore, the Indio Police Department leans more toward a second criterion, which comes from the International City Managers Association (ICMA). The ICMA states that one-third of a police officers' shift should be totally devoted to unencumbered patrol time (self-initiated), one-third should be devoted to responding to calls from dispatch and the remaining third should involve administration duties. Using the second criterion, the Department's goal is 1.5 officers per 1,000 population, which is close to the current ratio.

According to the Federal Bureau of Investigation (FBI), in 1991 Indio experienced 98.6 major crimes

per 1,000 people. For the same period of time, Riverside County's index was 76.2 crimes per 1,000 residents. FBI tracks eight major crimes: murder, rape, robbery, aggravated assault (assault with the intent to cause bodily harm), burglary, motor vehicle theft, arson, and larceny.

Table 5.3-1 shows the crime index for Indio in comparison to other Coachella Valley cities for the years 1984 through 1991.

INDIO FACTS:

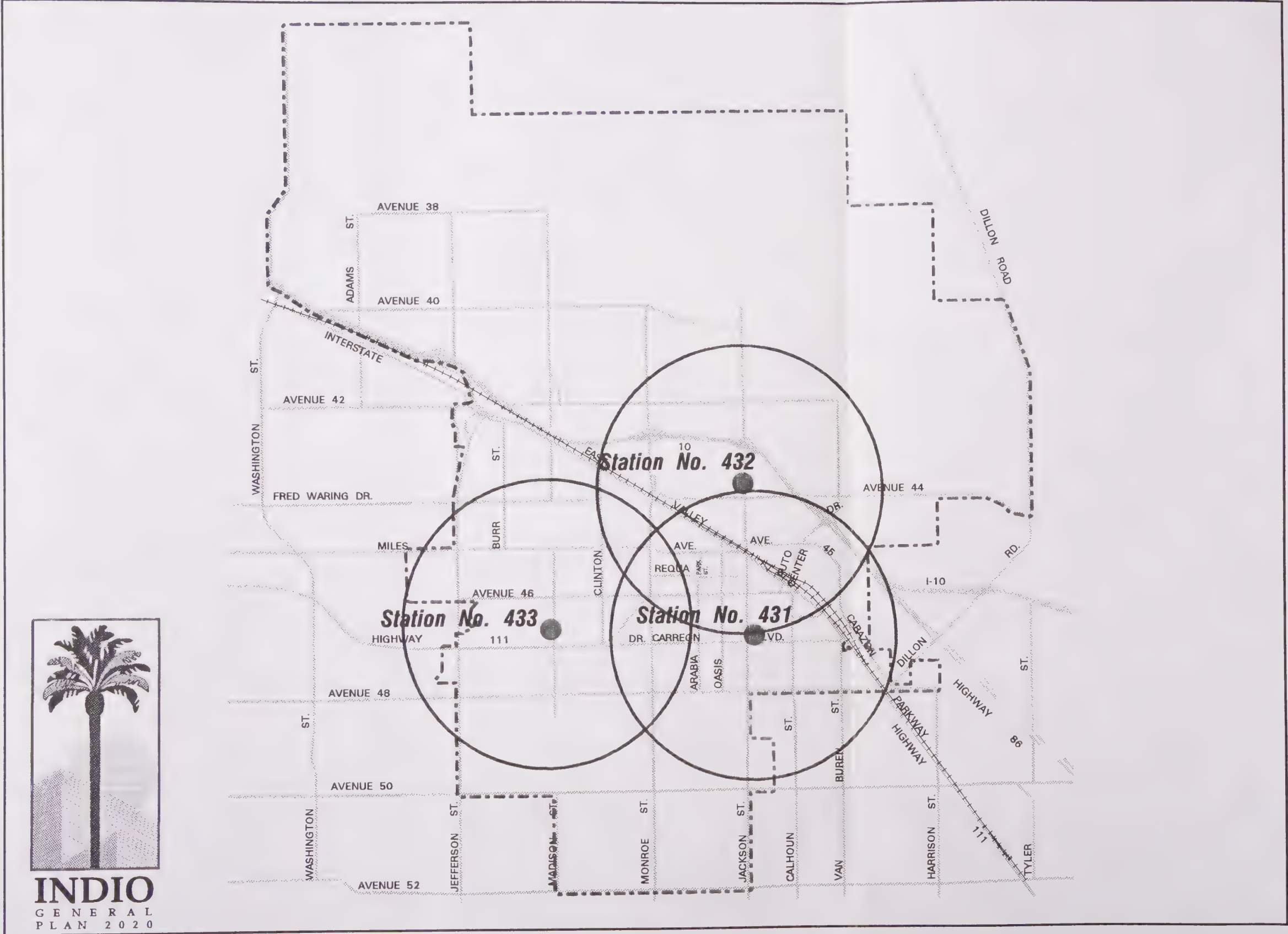
*The current City
Police manpower
goal is 1.4 sworn
officers per 1,000
population.*

5.3.2 Fire

The Indio Fire Department provides fire protection and paramedic services to the City of Indio. The Department has three stations in the City of Indio, which are shown on Figure 5.3-1 and are as follows:

- ▶ **Fire Station No. 431**
46-990 Jackson Street
One 2-man engine
One 2-man paramedic ambulance
One command vehicle
- ▶ **Station No. 432**
43-715 Jackson Street
One 2-man engine
- ▶ **Station No. 433**
46-621 Madison Avenue
One 2-man engine

The existing goal of the Fire Department is to provide service to all areas within Indio using a 1.5-mile service radius. As shown on Figure 5.3-1, the service areas of the existing three stations do not completely cover the existing City area, although response times are under 10 minutes for the entire City. To ensure adequate fire protection services in an emergency, the City of Indio maintains a mutual aid agreement with surrounding cities and County jurisdictions.



Fire Stations

Firestation No. 431
46900 Jackson Street

Firestation No. 432
43715 Jackson Street

Firestation No. 433
46621 Madison Street

Service Area

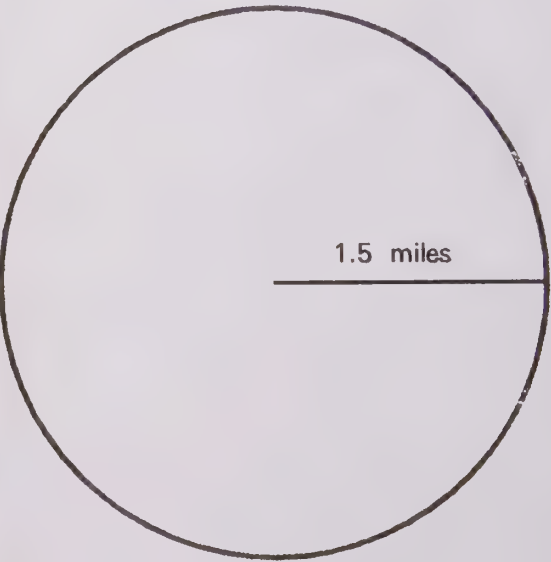


Figure 5.3-1
FIRE STATIONS AND
SERVICE AREAS


 Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



Table 5.3-1

COACHELLA VALLEY CRIME INDEX OFFENSES

Jurisdiction		1984	1985	1986	1987	1988	1989	1990	1991	1984-1991 +/- %
										% Increase
Indio	CCI	1,570	1,751	1,933	1,807	1,807	1,950	1,342	1,547	-1.4
	FBI	3,712	4,297	4,461	4,352	4,321	4,672	2,969	3,983	7.3
Palm Springs	CCI	1,926	1,578	1,773	1,899	2,132	2,092	2,320	2,350	22
	FBI	3,413	3,220	3,559	3,781	4,054	4,215	4,203	4,414	29
Cathedral City (Incorporated 1984)	CCI	333	506	618	562	769	814	969	1,245	273
	FBI	564	968	1,155	1,045	1,323	1,511	1,761	2,207	291
Coachella	CCI	464	440	504	368	563	374	440	706	52
	FBI	564	944	1,025	782	1,008	897	986	1,558	176
La Quinta	CCI							499	511	2.4
	FBI							773	899	16.3
Rancho Mirage	CCI							314	333	6.0
	FBI							613	610	-.4
Indian Wells	CCI							139	90	-35
	FBI							282	254	-10
Palm Desert	CCI							995	1,094	10
	FBI							2,195	2,666	21

CCI (California Crime Index) includes homicide, rape, robbery, aggravated assault, burglary, and motor vehicle theft.
FBI (FBI Crime Index) includes all of the above including larceny-thefts and arson.

As the Shadow Hills area develops, the Fire Department is planning to relocate Fire Station No. 432 to a location north of I-10. Its prospective location is near Avenue 42, on a proposed north/south arterial to be located between Jackson and Monroe Streets. This station is projected to have its existing complement plus a two-man paramedic ambulance. Depending on development, additional equipment may be necessary at this station (Chief Hammond, personal communication 1991).

The City is currently evaluating new means of providing an adequate level of service to the entire Planning Area. One possibility is a new scenario of locating fire stations in the City based on a 2.5-mile service radius. This radius is premised on the inclusion of fire sprinklers in all new buildings that are 200 square feet or greater.

**INDIO
FACTS:** *Three fire stations
serve the City of
Indio, with response
times under
10 minutes.*

Funding for the Fire Department currently comes from a general fund. A \$350.00 per dwelling unit fee is assessed to new development by City Ordinance.

5.4 EMERGENCY PREPAREDNESS

The following information was taken from the City of Indio Basic Emergency Operating Plan (City of Indio 1990), Emergency Management: Principles and Practice for Local Government (ICMA 1991), and the Operational System Description of the Incident Command System as used in the Orange County Emergency Operations Center (County of Orange 1991).

5.4.1 State Emergency Management

The California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code) provides the basic authorities for conducting emergency operations following the formal proclamations of emergencies by the local, state, or federal authorities. The provisions of the Act are further reflected and expanded on by local emergency ordinances. The California Emergency Plan, which is promulgated by the Governor and the Office of Emergency Services (OES), is published in accordance with the Act. It provides overall statewide authorities and responsibilities, and describes the functions and operations of government at all levels during extraordinary emergencies. Local emergency plans are considered to be extensions of the state plan.

Mutual Aid

The foundation of the state's emergency planning and response is a statewide mutual aid system. The California Disaster and Civil Defense Master Mutual Aid Agreement (1950), as provided for in the California Emergency Services Act, was adopted by California's incorporated cities and by all 58 counties. It created a formal structure in which each jurisdiction retains control of its own emergency services personnel and facilities, but can also give and receive help as needed. When their own resources are inadequate to handle a given emergency situation(s), the state is obligated to provide available resources to assist the local jurisdictions. The state is divided into six OES Mutual Aid Regions. The City of Indio is located in Region 6, which includes the counties of Riverside,

San Bernardino, Mono, Inyo, San Diego, and Imperial.

Requests for mutual aid support from local jurisdictions are submitted to the designated Operational Area Coordinator for the County. Under Section 8605 of the Emergency Services Act, each county is designated as an Operational Area. Use of the Operational Area during a State of Emergency or Local Emergency is the option of the county and the political subdivisions within the county area.

County of Riverside Disaster Preparedness

Riverside County Office of Disaster Preparedness is responsible for coordinating the various state, federal, local, quasi-public, and private agencies involved in emergency response and management, as discussed above. In addition, this office maintains its own plan for response to natural and manmade disasters and consists of a hazards database, communication system, disaster operations plans, and public awareness programs.

The Environmental Hazards and Resources Element of the Riverside County General Plan addresses risks to life and property through assessment of potential hazards and modification of settlement patterns and structural design. The hazards addressed in this element include natural hazards and manmade pollution and hazards. Natural occurrences that cannot be prevented include earthquakes, slope failure, erosion, floods, and wildland fires. Development in areas subject to natural hazards may create risks to life and property. Manmade pollutants and hazards resulting from rapid urbanization and population growth are generated as noise and toxic substances, and affect air, and water quality. The purpose of the element is to assure, through policy, predisaster preparedness and mitigation, and response and recovery after a disaster has occurred.

Local Emergency Management

Local (City level) jurisdictions are responsible for emergency operations within their respective jurisdictions. As the emergency situation develops and expands, other levels of support are provided as

required by the local jurisdiction. To receive additional support, requests are submitted through established channels. As discussed above, local jurisdictions submit requests to the Operational Area Coordinator and, if required, to the Mutual Aid Regional Coordinator.

The OES has established three levels of emergency response based on the severity of the situation and the availability of local resources. The designation of the level of emergency response will be dictated by each situation. As an emergency situation escalates from Level I to III, each successive level of emergency proclamation initiates another level of response. Level I is "a minor to moderate incident wherein local resources are adequate and available." A Local Emergency may be proclaimed. If additional personnel and/or facilities are needed, the response becomes a Level II response wherein requests for mutual aid will be initiated and a State of Emergency may also be proclaimed by the Governor. If the emergency is such that extensive state and federal resources are required, a Level III response will require that the Governor request a Presidential Declaration of an Emergency of a Major Disaster (under the Federal Disaster Relief Act of 1974). Upon a federal emergency declaration, the Federal Emergency Management Agency (FEMA) serves as the main federal contact and provides funds and services to the state for disaster relief.

When fully activated at Level III, the Statewide Emergency Management System consists of the Emergency Management staffs of all local jurisdictions, countywide Operations Areas, OES Mutual Aid Regions, and the state government. Figure 5.4-1 shows the organization of the system at Level III.

Incident Level Emergency Management System

Each successive level of response specifies the activation of Emergency Operation Centers (EOCs) and the initiation of an Incident Command System (ICS).

Disasters, unlike routine emergencies, require a multidisciplinary approach with simultaneous activities by many different departments, agencies, and organizations. Overall management and coordination of operations include on-scene incident

management. Whatever the structure of the local emergency management unit, the key to disaster response is the EOC. The EOC serves as the master coordination and control point for emergency response operations (ICMA 1991). They are centralized facilities designed to provide an adequate, protected working space and equipment to accommodate assigned staff and communicate with field units and other EOCs. During an emergency/disaster, they provide an organized, functional environment in which policy makers, management, and operations staff can coordinate resources, make policy decisions, conduct operations, gather information, coordinate communications, and provide public information. When the EOC is activated, coordination focuses on response-generated demands of the moment; however, the foundation of coordination is established before the emergency event.

Each EOC requires a management system to operate effectively. The ICS is an on-scene emergency response system developed by the fire service for use in managing large-scale incidents. Fire service departments throughout the United States, including the Indio Fire Department, are adopting an ICS to use in the management of EOC operations. It is one type of incident emergency management system used by several local jurisdictions to facilitate interaction between multiple agencies in their response to disasters.

The system is designed to integrate a wide range of internal (City) and external (county, state, federal) resources, while maintaining unity of command. Its organizational structure is based around five principal activities performed in any incident, including: command, operations, planning, logistics, and finance. It provides a standardized organizational structure, terminology and procedures that are designed to be flexible and adaptable to any kind of emergency management situation. This type of organization allows for a modular and rapid expansion of response as the needs of the incident/emergency expand. The emergency management system, as presented in the City of Indio Basic Emergency Plan, uses the ICS.

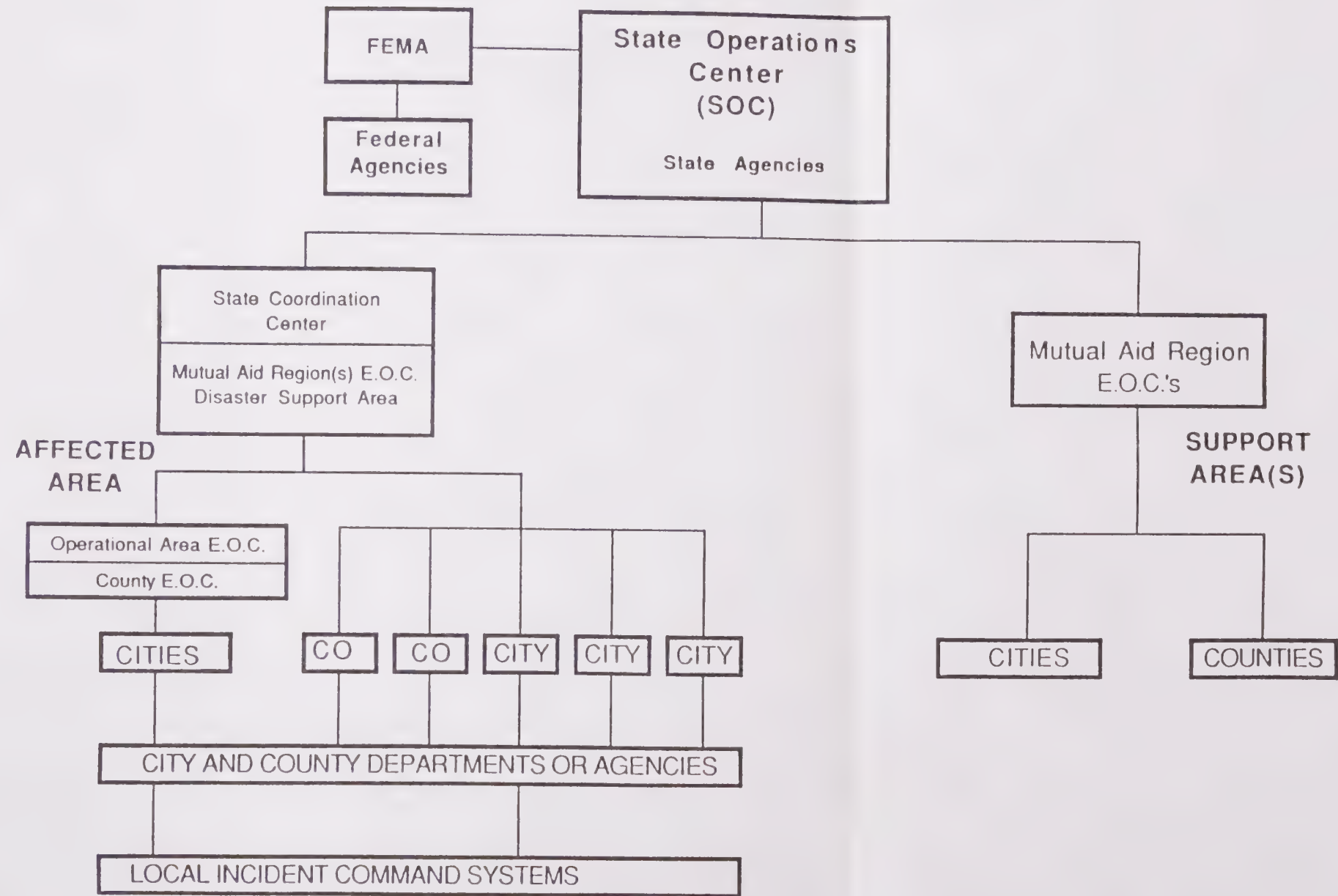



Figure 5.4-1
STATE EMERGENCY MANAGEMENT
FOR A MAJOR DISASTER (LEVEL III)

 Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



INDIO
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5.4.2 City of Indio Emergency Management

Local jurisdictions are responsible for developing and maintaining current emergency plans that are compatible with the California Emergency Plan and the California Master Mutual Aid Agreement. These plans must be designed to provide local resources to meet the emergency requirements of the community and the surrounding areas, and must be compatible with the emergency plans of neighboring jurisdictions.

Basic day-to-day emergency services within the City of Indio are provided by the Indio Police Department and Fire Department as discussed in Section 5.3. Medical emergency services are discussed in Section 3.4.2.

For extraordinary emergency situations associated with natural disasters, technological incidents, and nuclear defense operations, the City of Indio has prepared a Multihazard Emergency Plan that describes and outlines the City's planned all-hazard response to such situations. The plan is a preparedness document and is modeled after the California Emergency Plan. The City's plan consists of three parts: (1) the Basic Emergency Plan, (2) the functional annexes that describe the emergency response organization, and (3) contains operational data such as listings of resources.

INDIO FACTS: *Indio's emergency preparedness plans includes a multihazard emergency plan, basic emergency plan, and functional annexes.*

Part 1 - Basic Emergency Plan

- ▶ Provides operational concepts relating to various emergency situations.
- ▶ Identifies components of the City of Indio Emergency Management Organization.
- ▶ Describes the overall responsibilities of the organization for protecting life and property.
- ▶ Identifies possible sources of outside support that might be provided by other jurisdictions, state and federal agencies, and the private sector through mutual aid and specific statutory authorities.

Part 2 - Annexes

Consists of Annexes A through O. Within the City's Basic Emergency Operating Plan, emergency operations are divided into separate functions such as Fire and Rescue Operations (Annex B), Law Enforcement and Traffic Control (Annex C), and so forth. Each corresponding annex provides specific details on the organization, responsibilities, and procedures to accomplish these functions. Annex A establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations during disaster situations. It also provides information on alerting and warning procedures. Within the Plan, each color-coded Annex is supported by Emergency Action Checklists for all positions in the emergency management organization.

5.5 HAZARDOUS MATERIALS

Hazardous materials are commonly used by all segments of our society including manufacturing and service industries, commercial enterprises, agriculture, military bases, hospitals, schools, and households. If improperly handled, stored, or disposed of, these materials can have substantial health and environmental consequences.

In recent years, there has been a sharp increase in the reported number of hazardous material incidents in the City of Indio. This is partly due to greater governmental controls and an enhanced awareness on the part of both the general public and the City's emergency services.

Proper identification of potential problems associated with the handling, storage, and disposal of hazardous materials will play an increasingly important role in the anticipated residential, commercial, and economic growth of Indio and its greater sphere of influence as the City enters the 21st century.

5.5.1 Definitions

Over the years, the terms "hazardous materials" and "hazardous waste" evolved in a confusing setting as different governmental agencies advocated and adopted specific criteria for their characterization and classification. Federal, state, and local agencies used such descriptors as toxic, explosive, and radioactive to label hazardous waste. No master list of hazardous materials exists that can be agreed upon by all agencies that manage or regulate them. Furthermore, existing lists will continue to evolve and change as more is learned about the effects of hazardous substances and as new substances result from technological advances.

The Code of Federal Regulations (CFR Title 40, Part 261) defines hazardous materials on the basis of ignitability, reactivity, corrosivity, and/or toxicity. Title 22, Division 4 (Environmental Health) of the California Administrative Code Health and Safety Code defines a hazardous material as a substance or combination of substances that, because of its quantity, concentration, or physical, chemical, or infectious characteristics may either

- ▶ cause, or significantly contribute to an increase in mortality, or an increase in serious irreversible or incapacitating reversible illness; or
- ▶ pose a substantial present or potential hazard to humans or the environment when improperly treated, stored, transported, disposed, or otherwise managed.

Hazardous materials include a wide range of potentially injurious substances including pesticides, herbicides, toxic metals and chemicals, gases and liquified gases, explosives, volatile chemicals, and nuclear fuels.

5.5.2 Hazardous Materials in Local Environmental Setting

Based on discussions with State, County of Riverside, and City of Indio authorities, the most common hazardous materials and hazardous waste problems and concerns within the City and its surrounding sphere of influence are related to transportation accidents, illegal dumping, underground storage tank (UST) leaks, leaking natural gas pipelines, commercial/industrial wastes, agricultural pesticides, and illegal drug laboratories. Each of these sources is briefly described below.

INDIO FACTS:

In 1991, the fire department responded to 48 hazardous materials incidents.

Transportation

The most common hazardous material incidents in the City of Indio involve gasoline and oil spills resulting from traffic collisions. The potential for uncontrolled release of hazardous materials from vehicular accidents is increased by the routing of Interstate Highway 10 through the City. A wide variety of hazardous materials is carried by vehicles using this major transportation artery. It is estimated

that one-fourth to one-third of all vehicles using the highway are transporting some type of hazardous material (Norris 1992).

The Southern Pacific Railroad is another large transportation corridor through Indio that is a major carrier of hazardous materials. There have been no major railway hazardous waste accidents in recent years within the City of Indio, although the potential exists. (A derailment did occur along this section of the railway in the 1970s.) Currently, approximately 36 to 40 trains pass over the Southern Pacific Railway in each 24-hour period, and it is estimated that 70 percent of the trains carry some type of hazardous materials (Norris 1992).

The City of Indio is also situated along a major east-west aircraft corridor. An accident could involve an aircraft carrying hazardous materials in general overflight or while spraying with agricultural chemicals.

Illegal Dumping

Illegal dumping of hazardous waste is a widespread problem that is by no means unique to the City of Indio. Illegal dumping occurs in a variety of forms including disposal on unimproved land, into sewers and storm drains, or simply dropping the material by the roadside. Household hazardous materials such as used oils, paints, thinners, and antifreeze may be dumped on their own property by homeowners who may or may not realize that the activity is illegal.

As the City of Indio is developed, the amount of unimproved land will decrease and therefore less dumping will occur. However, the overall number of hazardous waste sites requiring cleanup as a result of illegal dumping is expected to increase due to the increasing costs of legal disposal and the phased closure of many existing hazardous waste landfills.

Leaking Underground Storage Tanks (USTs)

A recent study identified more than 30 reported UST release cases with City of Indio addresses (Leighton and Associates 1990). It is important to note that many of these cases had been remediated and officially closed at the time of the report; however,

the figures help demonstrate the overall magnitude of the leaking UST problem. Potential negative impacts from leaking USTs in the Indio area are especially high due to the relatively shallow average depth to groundwater (approximately 40 feet below the ground surface).

The majority of leaking USTs in Indio involve leaking gasoline, diesel, and waste oil associated with service stations. It is anticipated that increasingly stringent government regulations and inspections, coupled with greatly improved design and installation practices (such as double-walled construction, leak detection systems, and protective coatings) will result in a fewer UST leaks in the future.

Leaking Natural Gas Pipelines

In 1991, the Indio Fire Department responded to several natural gas pipeline leaks. Typically, these leaks developed during grading and construction operations, when buried pipelines were accidentally disturbed.

Two high-pressure, liquid refined petroleum product pipelines parallel the Southern Pacific Railroad through Indio. Currently, the older 12-inch-diameter pipeline is not being used. The new 20-inch pipeline was completed in 1991 and is now in active service. There have been no hazardous incidents involving these pipelines to date.

Commercial/Industrial Sources

In addition to leaking USTs in service stations, the most common sources of commercial hazardous materials contamination in the City of Indio have been associated with automotive repair and autobody shops, dry cleaners, photoprocessing shops, and retail stores.

Hazardous materials typically encountered in automotive repair shop operations include halogenated cleaning solvents, antifreezes (ethylene glycol), freon, and various oils and greases. Autobody shops commonly use a variety of paints, paint solvents, and thinners in their operations.

In the past, there have been hazardous material incidents involving dry cleaning fluids within the City of Indio. However, due to changes in the dry

cleaning process, this problem has greatly diminished in recent years. Photoprocessing facilities in Indio are another source of potentially hazardous materials. A number of chemicals are used in the development process, including silver solutions.

Many types of retail stores in Indio also store hazardous materials on their shelves. If an upset such as an earthquake or fire occurs, these materials may be subject to uncontrolled release. One recent incident in Indio involved an automotive supply store that burned down. Liquid draining from the facility after the fire was found to have a pH of 3, which is highly acidic (Green 1992).

Currently, there is very little industrial development within the City of Indio, and there are no known hazardous material problems associated with existing facilities.

Agricultural Pesticides

There is a long history of agricultural production in some portions of the Indio area. These agricultural activities typically included periodic applications of pesticides and herbicides. Pesticides and herbicides vary in toxicity and persistence in the soil. Pesticides that degrade slowly over time may leave undesirable residues on crops or in the soil, resulting in higher levels of pesticides in the food chain. Other pesticides are easily degraded and therefore do not contaminate topsoils or threaten groundwater supplies.

A recent study by Leighton and Associates (1990) identified 13 types of pesticides and herbicides that have been applied to crops in the general Indio-Coachella-Thermal area. Long-term agricultural pesticide use has resulted in localized contamination of topsoils and groundwater in some areas within the Coachella Valley (Draft EIR for the Proposed CVEZA 1991).

Illegal Drug Laboratories

Although not specifically encountered in the City of Indio and its sphere of influence, local emergency hazardous materials response teams have had to respond to a growing number of situations involving

illegal drug laboratories and hazardous materials in the Coachella Valley.

5.5.3 HazMat Emergency Response

The Hazardous Materials Incident Emergency Response Plan for the City of Indio is contained in Appendix 1-2 of the Basic Emergency Operating Plan for the City. The Plan provides a classification system to be used in determining the level of response required to handle the incident. Classification criteria are based on the level of expertise needed; extent of municipal, county, and state government involvement; extent of injuries and/or deaths; and whether or not evacuation of civilians is necessary.

Based on where the incident occurs, the HazMat Emergency Response Plan also establishes who the incident commander (IC) will be. The City of Indio Fire Department functions as the IC at all hazardous material incidents that occur on streets and roadways, or offroad on public or private property. The only exception is if an accident occurs along I-10, in which case the California Highway Patrol (CHP) assumes this role, with Caltrans assisting with traffic control. Figure 5.5-1 indicates the number and type of hazardous material incidents the City Fire Department responded to in 1991.

Through a fee for service agreement, the Indio Fire Department can call for assistance from the California Department of Forestry and Fire Prevention/Riverside County Hazardous Materials Response Team (HazMat 1) located in Beaumont, California, should the need arise. This team includes a crew of three firemen and two public health officers who are specially trained to handle hazardous material emergencies.

For all incidents that occur on streets and roads outside the City limits in unincorporated Riverside County, the CHP also functions as the IC. Offroad on public and private property in the unincorporated areas, the Riverside County Fire Department functions as the IC.

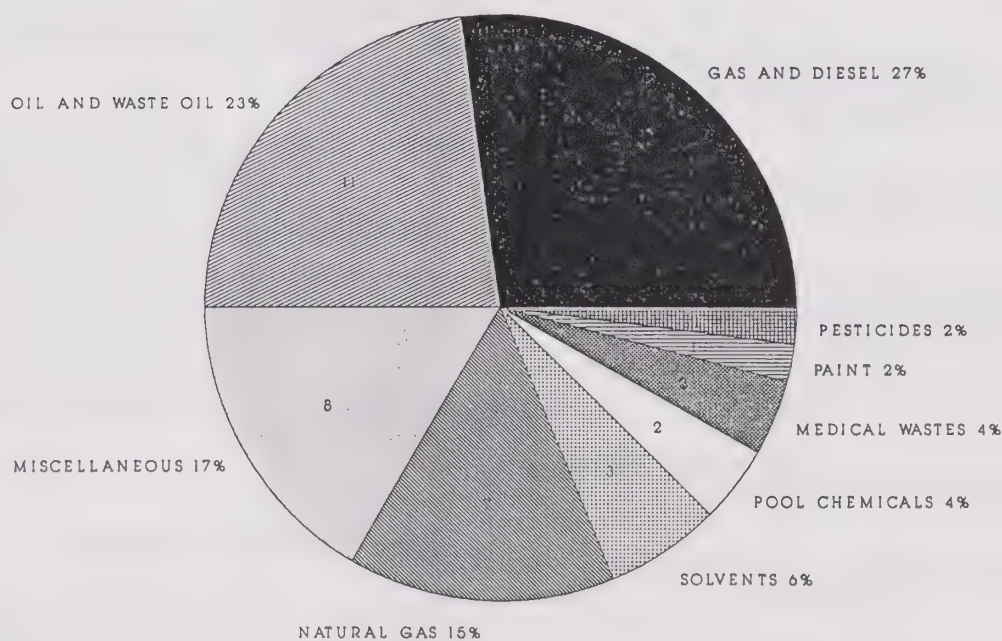


Figure 5.5-1
INDIO FIRE DEPARTMENT
1991 HAZARDOUS MATERIAL INCIDENTS

5.6 GEOLOGY AND SEISMICITY

5.6.1 Purpose and Scope

A geotechnical assessment report was prepared by Zeiser Geotechnical for this ESR and is summarized below.

The purpose of the geotechnical assessment report was to provide a technical evaluation of the available geologic and geotechnical data for use in preparation of the ESR and subsequent General Plan Update for the City of Indio.

The scope of work for this report included the following tasks:

- ▶ review of available pertinent geotechnical literature, reports, maps, and agency information pertinent to the subject area;
- ▶ interpretation of stereo aerial photograph pairs, dated 1939 through 1990;
- ▶ geologic field reconnaissance to verify and update planning area geotechnical conditions and distribution of soil/geologic units and features as documented on published maps and observed on aerial photograph; and
- ▶ preparation of the report summarizing findings, conclusions and recommendations.

No subsurface investigation of the Planning Area was conducted for the assessment.

5.6.2 General Topography

The elevations of a majority of the Planning Area, with the exception of the Indio Hills, lie at or below sea level, and the topography falls off very gently to the southeast at gradients of 1 to 2 percent. The lowest region within the Planning Area lies along the far southeastern portion of the City at an elevation of -50 feet below sea level. The Indio Hills rise abruptly to the northeast from a base elevation of approximately 100 feet to a maximum height within the Planning Area of 1,035 feet above sea level. Another small series of hills lies just southwest of the Indio Hills in the Desert Park area. These hills rise up approximately 100 feet above the surrounding area.

5.6.3 Regional Geology

The City of Indio and sphere of influence areas lie within the Coachella Valley and include the southern portion of the Indio Hills. The Indio Hills lie approximately 1 mile southwest of the Little San Bernardino Mountains, which are generally considered to be the easternmost extension of the Transverse Ranges Geomorphic Province. The Indio Hills consist mainly of geologically young bedrock units that have been uplifted by tectonic movement along the San Andreas fault zone. The San Andreas fault zone, which transects the northern portion of the Planning Area from northwest to southeast, is one of the most widely known structural features in California and extends from the Gulf of Mexico to Point Arena, north of San Francisco.

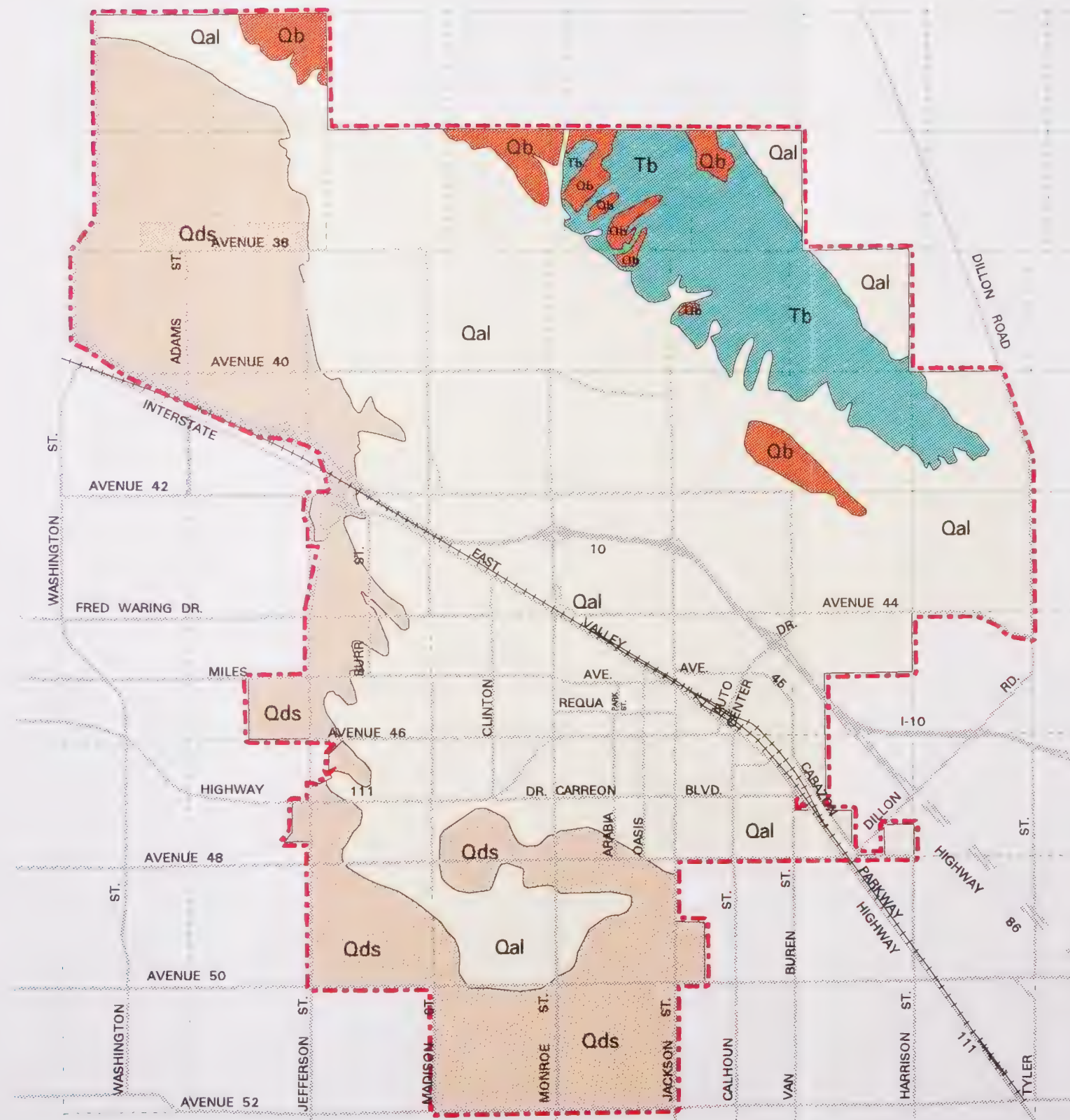
The Coachella Valley is the northernmost extension of the Salton Trough, a northwest-trending feature that resulted from displacement along the San Andreas and San Jacinto fault systems. Approximately 21,000 feet of Cenozoic sediments, which are less than 65 million years in age, fill the trough at its maximum thickness, and continued spreading of the basin (trough) into the present time is maintaining an active process of rapid alluvial infilling (Zeiser 1991).

5.6.4 Bedrock Units

The bedrock units shown on the geologic map, Figure 5.6-1, are combined into two basic groups: Tertiary bedrock (Tb), which is bedrock older than 1.8 million years, and Quaternary bedrock (Qb), which is bedrock younger than 1.8 million years. The Tb contains the Mecca, Palm Springs, and Canebrake formations, while the Qb consists solely of the Ocotillo conglomerate. The bedrock under most of the Planning Area is covered by various depths of younger alluvial deposits and is only exposed in areas where recent tectonic movements have uplifted these materials, such as in the Indio Hills.



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Geologic Type

- Dune Sand (Qds)
- Alluvium (Qal)
- Quaternary Bedrock (Qb)
- Tertiary Bedrock (Tb)

Figure 5.6-1
GEOLOGY



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

Mecca Formation

The oldest bedrock unit found within the Planning Area consists of an alternating pebbly arkose sandstone, and massive, poorly sorted conglomerate, which have been named the Mecca formation. The actual age of the Mecca formation has not been definitely established due to the absence of fossils. However, based on stratigraphic relationships, the Mecca formation has tentatively been given an age of Pliocene, 2 to 5 million years before the present (Popenoe 1959). Outcrops of the Mecca formation are exposed along the southeastern portions of the Indio Hills.

Palm Springs/Canebrake Formation

Lying on top of the Mecca formation, and thus younger, the Palm Springs formation grades laterally into the Canebrake formation. These units consist of alternating sequences of tan to reddish-gray, well bedded arkosic sandstones and yellowish to gray conglomerates. The age of these units has been assigned as late Pliocene to early Pleistocene, 1.8 to 2 million years before the present (Fox 1988). The Palm Springs and Canebrake formations are exposed as steeply dipping beds along the southwestern portion of the Indio Hills.

Ocotillo Conglomerate

The relatively younger Qb units consist of members of the Ocotillo conglomerate. The Ocotillo conglomerate consists of grayish semiconsolidated gravel and boulder conglomerate with alternating beds of semiconsolidated sandstone. The Ocotillo deposits have been assigned an age of Middle to Upper Pleistocene, 11,000 to 500,000 years before present (Popenoe 1959). Coarse-grained poorly bedded conglomeratic sandstones and sandy conglomerate deposits can be found overlying the older rock formations along the northern portions of the Indio Hills.

The majority of the Planning Area is overlain by various depths of surficial deposits. The surficial deposits depicted on the geologic map (Figure 5.6-1) were categorized into two basic groups: alluvium (Qal) and dune sand (Qds).

Alluvium

Deposits of Qal exist across a large portion of the Planning Area. These units consist of alluvial plain, lake deposits, and stream channel deposits. The alluvial plain deposits range from coarse-grained sand and gravel to silts and some clays. Typically, the alluvial deposits are loose and unconsolidated. The depth of the Qal varies across the Planning Area but generally increases to the southwest.

The tectonic uplifting of the Indio Hills and subsequent erosion have resulted in various fan and coalescing bajada deposits emanating out of the Indio Hills (Dibblee 1954). These units are similar in nature to the alluvial plain deposits but tend to be coarser grained. Stream channel deposits can be found across the Planning Area along the Whitewater River drainage course, its tributaries, and in the many narrow draws and channels intertonguing with the alluvial plain and fan deposits. The stream channel deposits are subject to intermittent transport during periods of heavy runoff.

Dune Sand Deposits

Strong winds blowing from the northwestern end of the Coachella Valley, over time, have resulted in the formation of vast regions of dunes along the western and southern portions of the Planning Area. The dunes consist predominantly of very loose, fine-grained sand. The Qds deposits are typically subject to reworking and/or transport by wind if not adequately stabilized.

5.6.6 Geologic Structure

The structure of the Coachella Valley region is dominated by the steeply dipping, northwest-trending faults associated with the San Andreas fault zone. The valley is a fault bounded trough, down-dropped in relation to the uplifted mountain ranges along the northeastern and southwestern margins. The Indio Hills have been folded, sheared, and uplifted into a broad arched anticlinal dome (Popenoe 1959).

5.6.7 San Andreas Fault Zone

In the vicinity of Indio, the San Andreas fault zone consists of two branches that converge southeastward: the Indio Hills fault northeast of the hills and the Banning/Mission Creek fault southwest of the hills (County of Riverside 1983). The Banning/Mission Creek fault is considered to be the most active tectonic feature in the region (Clark 1985). Evidence for the fault is marked by disrupted alluvium, truncated older fans, low lying scarps, and vegetation lineaments where fault-dammed water has stimulated growth along the northeast side of the fault. Both faults form low scarps that commonly face northeastward in the northwest part of the hills and southwestward in the southeast part.

The Indio Hills are a direct result of uplift along these two faults and have been sliced by right lateral movement on the faults. Older bedrock sediments near the fault are invariably upended, contorted, or sheared. Geologically recent right lateral movement is demonstrated by numerous offset washes.

The major traces within the San Andreas fault zone follow a uniformly straight course through the Indio Hills southeast to the northeast shore of the Salton Sea and northwest to the vicinity of White Rock. The linear nature of this feature indicates the fault planes are vertical or nearly so (Dibblee 1964). The total horizontal displacement along the San Andreas fault zone since Pliocene time (1.6 to 1.8 million years before present) supposedly amounts to several miles (Dibblee 1964).

The Alquist-Priolo Special Studies Zones Act allows the State of California to delineate restricted zones around faults which exhibit evidence to indicate that they are sufficiently active and have a well defined surface trace. The two major faults of the San Andreas fault zone within the Planning Area, the Indio and the Mission Hills/Banning faults, currently lie within an Alquist-Priolo Special Studies Zone, as depicted on the Special Studies Maps for the Myoma, SW 1/4 Lost Horse Mountain, and Indio Quadrangles (California Division of Mines and Geology 1980).

5.6.8 Seismicity

Due to the presence of the San Andreas fault zone across the northeastern regions of the Planning Area, it is reasonable to expect a strong ground motion seismic event to occur as a result of a movement along one of the faults associated with this zone.

Major faults in California are commonly rated by the Maximum Credible Earthquake and Maximum Probable Earthquake that could occur as a result of abrupt movement along the fault. A Maximum Credible Earthquake is defined as the largest earthquake that appears to be capable of occurring given the known geologic framework of the region. A Maximum Probable Earthquake is a statistical analysis of the largest earthquake anticipated to occur during a 100-year return period.

INDIO FACTS: *The San Andreas fault zone in Indio is expected to have a 7.1 maximum probable earthquake.*

A Maximum Credible Earthquake of moment magnitude 8.0 and a Maximum Probable Earthquake of 7.1 is anticipated along the San Andreas fault zone in the Indio region (Wesnousky 1986; Ziony et al. 1985).

Table 5.6-1 depicts the geologic hazards potential from fault movement as severe and recommends advanced planning avoidance, restrictions plus code conformance, and special work in areas affected.

5.6.9 Seismic Ground Shaking Intensities

The County of Riverside has established seismic ground shaking intensity ratings on a scale from I to V, I being lowest and V highest. These ratings are based on the distance to a major fault, the expected magnitude event, and the underlying geologic materials. Due to the presence of the San Andreas

Table 5.6-1

**CHECKLIST OF GEOTECHNICAL HAZARDS AND
POTENTIAL MITIGATION MEASURES (MODIFIED FROM CDMG NOTE 46)**

Problem	Activity Causing Problem	Degree of Hazard or Problem				Possible Mitigation		
		1	2	3	4	A	B	C
Earthquake Damage	Fault movement (onsite)				■		■	■
	Liquefaction	■	■	■	■		■	■
	Landslides		■			■		
	Differential compaction/seismic settlement			■		■		
	Ground rupture				■		■	■
	Ground shaking				■	■		
	Tsunami	■						
	Seiches	■						
	Flooding (dam or levee failure)			■		■		
Loss of Mineral Resources	Loss of access		■					
	Deposits covered by changed land use		■					
	Zoning restrictions	■						
Waste Disposal Problems	Change in groundwater level			■			■	■
	Disposal of excavated material	■						
	Percolation of waste material	■	■	■	■	■	■	
Slope and/or Foundation Instability	Landslides and mudflows		■			■		
	Unstable cut-and-fill slopes		■			■		
	Collapsible and expansive soil	■	■	■		■		
	Trench-wall stability				■			■
Erosion, Sedimentation, Flooding	Erosion of graded areas			■				■
	Alteration of runoff			■		■		
	Unprotected drainage ways			■		■		
	Increased impervious surfaces			■		■		
Land Subsidence	Extraction of groundwater gas, oil, geothermal energy			■			■	
	Hydrocompaction, peat oxidation	■						
Volcanic Hazards	Lava flow	■						
	Ash fall	■						

1 = None

3 = Moderate

A = Code Conformance

2 = Slight

4 = Severe

B = Code Conformance + Special Work: Can Include Additional Investigation, Special Site Preparation, or Special Foundations.

C = Advance Planning Avoidance, Restrictions

Fault zone, the majority of the region within the Planning Area has been given the rating of V (County of Riverside 1983). Seismic ground shaking intensities are generally expected to diminish away from the surficial traces of the faults. Therefore, a southwestern portion of the City was given a rating of IV (see Figure 5.6-2).

The County of Riverside Planning Department has also established land use suitability guidelines based on the seismic ground shaking intensity value assigned to the region. In an area underlain by relatively thick and soft alluvial sediments, such as the City of Indio, the Indio Ranchos Annexation Area, and much of the Shadow Hills Assessment District (see Figure 5.6-1), the following criteria apply. With a seismic ground shaking intensity rating of IV or greater, construction of critical structures, such as nuclear-related systems, major dams, explosives or hazardous materials manufacturing, handling or storage facilities, hospitals and other emergency facilities, as well as essential structures, such as police, fire and communications systems, emergency operation centers, electric power inter-tie systems, power plants, small dams, utility substations, sewage treatment plants, water works, local gas and electric distribution lines, aqueducts, major pipelines, major highways, bridges, tunnels, and schools, should be restricted. Exceptions to these criteria would be if alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated. The term restricted use areas is further defined as areas where levels of ground shaking generally are expected to exceed design levels defined in the Uniform Building Code by a factor of 5. Any future planning scenarios for the City of Indio should take into consideration the very high seismic ground shaking intensity values anticipated for the Planning Area (see Figure 5.6-2).

5.6.10 Liquefaction

During a large seismic event, while a site is undergoing strong ground shaking, liquefaction may occur in loose unconsolidated, cohesionless soils, which are saturated in moisture. This process involves the transformation of the soils from a solid to liquid state as a result of increase pore pressure and reduced effective stress.

The regions of the Planning Area in which liquefaction may occur during a large seismic event are depicted on Figure 5.6-2 and include the southern portions of Sections 11 and 12; the southwest portion of Section 36; all of Sections 13, 14, and 35 of Township 5 south, Range 7 east; the southeastern portion of Section 18 of Township 5 south, Range 8 east; and the southeast portion of Section 3 as well as all of Section 2 of Township 6 south, Range 7 east (County of Riverside 1983).

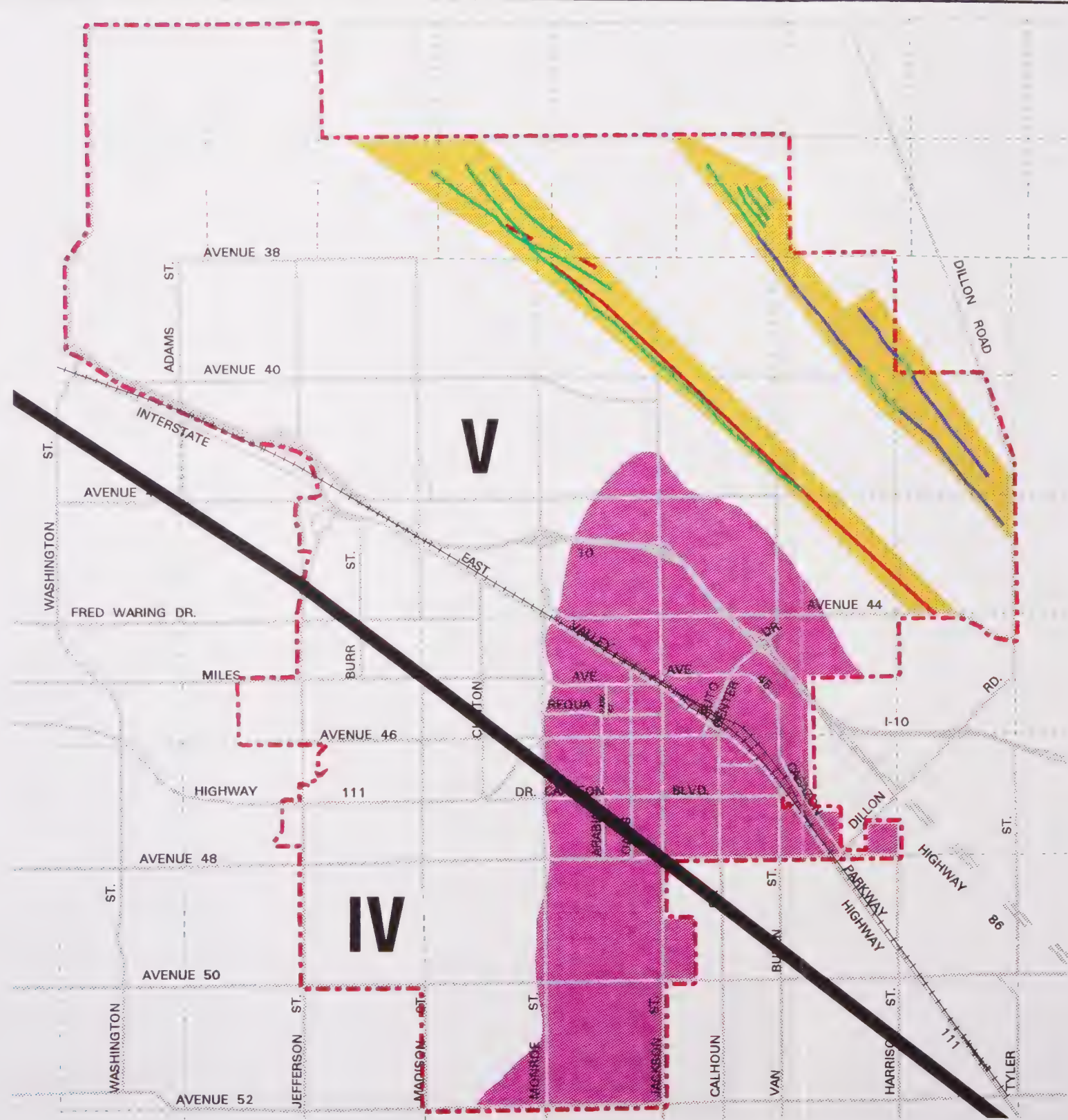
The degree of hazard to the City of Indio from liquefaction ranges from none to severe (see Table 5.6-1). Areas within the current City of Indio boundaries that are considered susceptible to liquefaction generally include all of the areas east of Monroe Street (County of Riverside 1983; Figure 5.6-2).

During periods of high regional precipitation, the depths to groundwater decrease. During these periods, the regions in which liquefaction may occur will laterally increase.

5.6.11 Wind Erosion

The periodic strong winds that blow from the northwest coupled with the great volume of new sand brought into the valley by the Whitewater River and its tributaries result in a vast formation of shifting Qds across the Coachella Valley. A large portion of the Planning Area contains deposits of windblown Qds although, the surficial extent in many areas has been masked by agricultural development (see Figure 5.6-1). The Qds deposits are subject to reworking, erosion, and transport by the action of wind and water. The blowing sand damages land, buildings, vehicles, traffic signs, drainage culverts, and public utilities, and lowers property values (USDA SCS 1967).

Much of the Qds within the City of Indio have been stabilized due to the combined efforts of agricultural plant growth and artificial wind breaks. Large regions of undeveloped Qds still exist along the northwestern and western portions of the Planning Area (USDA SCS 1967). Developments within these areas would be subject to severe wind erosion unless proper management programs are implemented. Mitigation measures common to the area include plantings to provide ground cover, and windbreaks of trees,



Geologic Hazards

SEISMIC SHAKING BOUNDARY

Seismic Shaking Intensities
(I = Low - V = High)

Source: Special Studies
Zones Maps: Myoma,
Indio & Lost Horse
Mtn. Quadrangle; Riverside
County Community Area Seismic
Geology Maps.

FAULTS

Accurately Located Faults
Faultline Locations Inferred
Faultlines Concealed by
Surficial Deposits

Alquist-Priolo
Special Studies Zone

LIQUEFACTION

Potential liquefaction where
groundwater is generally
shallower than 30 feet.

Source: Liquefaction Potential
zones; Riverside County Community
Area Seismic Geologic Maps.

Figure 5.6-2
GEOLOGIC HAZARD MAP



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Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'



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shrubs, or fences. A well-planned community should minimize unprotected regions with most areas covered by golf courses, parks, and so forth.

5.6.12 Soil Stability

An engineering property especially important to many types of engineering works and construction situations involving soil is the compressibility of the soil, or the degree to which soil will decrease volume or density under a load. A structure placed on a highly compressible soil is likely to suffer settlement damage as the soil volume decreases under the load, oftentimes in an unequal or differential manner. The upper portions of the natural alluvial materials present across much of the Planning Area tend to exhibit low density and high compressibility in their natural state.

5.6.13 Natural Slope Stability/Mass Movement

Due to the low relief across a majority of the City of Indio and the two proposed annexation areas, natural slope stability and mass movement, also known as landslides, are generally not considered a constraining factor.

The relatively steep topographic relief within the Indio Hills may render these areas susceptible to unstable slopes and landslides. The regions of the Indio Hills underlain by the Ocotillo and Mecca bedrock formation (Qb; see Figure 5.6-1) are prone to surficial instabilities due to the poorly cemented nature of the sediments. The Palm Springs/Canebrake bedrock formations found along the southeastern portion of the Indio Hills are typically better cemented and steeply dipping. These factors tend to increase the stabilities of the natural slopes.

The hazard potential of slight for landslides referred to in Table 5.6-1 therefore relates to the Indio Hills region north of the city. Figure 5.6-3 shows slope categories within the Planning Area.

5.6.14 Unique Natural Features

With a total length of more than 740 miles, the San Andreas is the longest fault in California and

perhaps the best known fault in the world. One of the most remarkable characteristics of the San Andreas fault is the tendency for each new displacement to follow almost the exact trace of an earlier event. Recent studies have determined that, in some instances, displacements have occurred repeatedly on the same breaks for periods of up to 10,000 years or more (Wesnousky 1986). By studying these breaks, geologists and seismologists hope to gain a better understanding of the nature of earthquakes and perhaps predict future events.

The presence of the San Andreas fault, considered a unique geologic feature by the scientific community, is clearly marked within the Planning Area along the base of the Indio Hills, both northerly and southerly, by fault scarps, active artesian springs, offset washes, and abrupt termination of lithologic units. The Alquist-Priolo Special Studies Zone boundaries, shown on Figure 5.6-2 for the two major branches discussed in Section 5.6.7, generally define the limits, as known at this time, of these unique features. The Indio Hills in between the two zones are not considered unique.

5.6.15 Summary of Geologic Conditions

Exposed within the Indio Hills, located to the northeast of the City, are the bedrock units, Mecca formation sandstone, Palm Springs/Canebrake formation sandstone, and Ocotillo conglomerate. The existing City of Indio and surrounding flats are predominantly covered with various deposits of alluvium and dune sand.

The San Andreas fault zone consists of two branches that converge southeastward through the northern portion of the Planning Area, the Indio Hills fault northeast of the Indio Hills and the Banning/Mission Creek fault southwest of the Indio Hills. The Indio Hills are a direct result of uplift along these two faults.

Due to the presence of the San Andreas fault zone across the northeastern regions of the Planning Area, it is reasonable to expect a strong ground motion seismic event of moment magnitude 7.1 or greater to occur as a result of a movement along one of the faults associated with this zone.

The majority of the region within the Planning Area has been given the seismic ground shaking intensity rating of V, which is the highest value the County of Riverside uses.

The elevation of groundwater within the Planning Area varies from approximately 10 feet above sea level in the northwestern regions to approximately 50 feet below sea level along the southeastern regions. Allowing for the topographic contours, the depths to groundwater therefore generally range from 90 feet below existing ground along the far northwestern regions of the Planning Area to 30 feet or less within the eastern and southeastern regions.

Liquefaction may also occur during a large seismic event throughout much of the east half of the City of Indio.

During periods of heavy precipitation, flood waters north of the city would be diverted between the Indio Hills and the existing flood control levee. Southeast of the levee, the potential for flooding from this source is minimal, except during the possible failure of the levee structure during large floods and/or earthquakes. The areas south of the Whitewater River may be susceptible to flooding from the river.

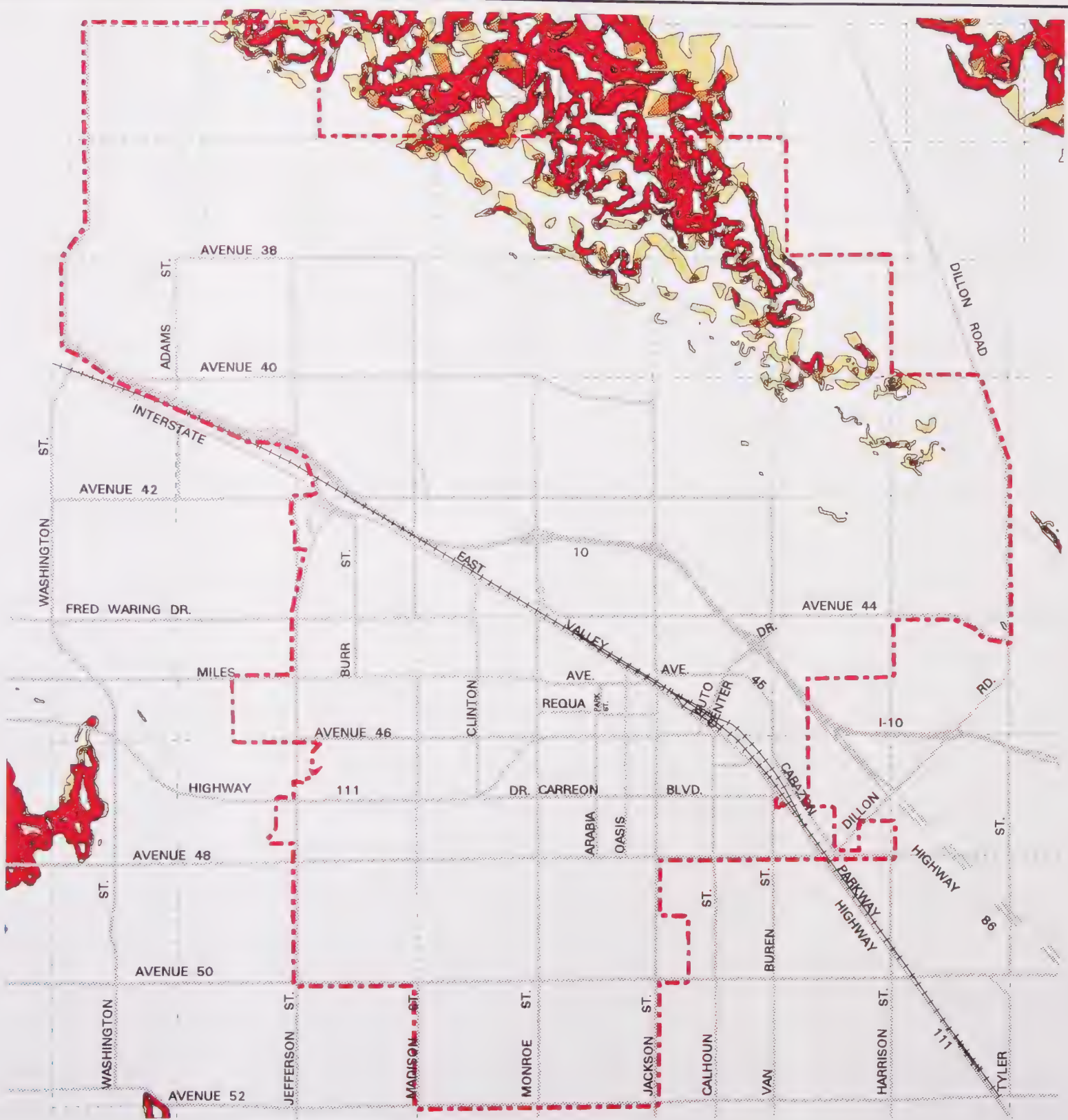
The western portions of the Planning Area contain extensive deposits of windblown dune sands. The surficial extent in many areas has been masked by agricultural development. Unstabilized dune sand deposits are subject to reworking, erosion, and transport by the action of wind and water.

The upper portions of the alluvial materials present across much of the Planning Area tend to exhibit low density and high compressibility in their natural state when subjected to engineering design and construction criteria.

Natural slope stability and mass movement, also known as landslides, are not considered a factor across a majority of the Planning Area. The Indio Hills are the exception and may be more susceptible to unstable slopes and landslides.

A checklist of geotechnical hazards and their associated mitigation measures is included in Table 5.6-1. The estimated degree of hazards for various geotechnical problems discussed in this document are summarized as well as general possible mitigation measures. The checklist was

modified after an environmental assessment format for geotechnical issues suggested by the California Department of Conservation, Division of Mines and Geology, for any region in California and not is therefore unique to the City of Indio. Accordingly, categories such as tsunamis and seiches, or large waves generated on an ocean or a large body of water by a seismic event, are not generally considered a factor in the Indio desert region and thus receive a rating of "None."



Slope Categories

- 0-15% Slope
- 15-25% Slope
- 25-30% Slope
- Greater than 30% Slope

Figure 5.6-3
SLOPE MAP



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1" = 6000'

5.7 FLOOD HAZARDS

The Planning Area consists of primarily urban and agricultural uses south of the CVSWC (Whitewater River) and agricultural and open space land uses with widely scattered residential sites north of the CVSWC. The natural topography of the land within the Planning Area slopes in a northwest to southeast pattern at approximately 0.5 percent.

The soils surface characteristics within the majority of the Planning Area are of low stormwater runoff potential. The soils have high infiltration rates even when thoroughly saturated and consist chiefly of deep, well to excessively drained sands or gravels. These soils have a high rate of water transmission. However, in some portions of the Planning Area, there are a few stratifications of claypan or clay layer that have very poor infiltration rates. These areas are subject to more frequent flood inundation and may cause "standing water" problems.

The majority of the area has been mapped by FEMA and is generally characterized in four ways: (1) area of 100-year flood; (2) areas between 100- and 500-year flood; (3) areas of minimal flooding; and (4) areas of undetermined, but possible, flood hazards. The area generally north of CVSWC and east of Madison Street has not been mapped and flood hazard information is not available (see Figure 5.7-1).

The climate of the Coachella Valley is characterized as a subtropical desert region with high summer daytime temperatures, low rainfall, low relative humidity, and cool nights. Maximum daytime summer temperatures can reach 125°F on the desert floor, contrasting with subfreezing temperatures during the winter months at night. Mean seasonal precipitation within the Coachella Valley region ranges from a low of 3 inches in the eastern desert regions to 35 inches in the San Jacinto Mountains.

Three types of storms can occur over the Valley area: general winter storms, general summer storms, and high-intensity thunder storms. Most precipitation results from the general winter storms that normally occur during the periods of December to March inclusive. These storms, which often last for several days, are a result of extratropical cyclones accompanied with the orographic lifting and

cooling of the air masses resulting in precipitation as they move eastward in from the Pacific Ocean.

General summer storms, although rare, occur normally in the months from July through September and result from an influx of tropical, moisture-laden air originating over the Gulf of Mexico or the South Pacific Ocean. Although these storms are uncommon, they can result in heavy precipitation.

High-intensity thunderstorms can occur at any time of the year causing extremely high rates of precipitation for relatively short durations. These storms are generally isolated phenomena and are most common from July to September when moist, unstable air is subjected to convective lifting.

Historical references indicated that relatively large winter floods occurred in or near the Whitewater River Basin in 1850, 1859, 1862, 1876, 1886, 1891, 1909, and 1916. The floods of 1927 and 1939 appear to have been the largest storms since the turn of the century. One of the larger tropical storms recorded in recent history (September 1976) was tropical storm "Kathleen" in the category of a once-in-160-years plus storm in intensity.

**INDIO
FACTS:** *The largest storm in recent history was "Kathleen" in 1976. She was a category of a once-in-160-years plus storm in intensity.*

5.7.1 Flood Management

Development of properties in the Planning Area has occurred without a master plan for drainage. As a result of this lack of flood management planning, the following flood problems exist in the Planning Area.

City of Indio Stormwater System

Natural flooding in the areas north of the CVSWC is limited to the properties upstream of I-10. Flooding

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in this area occurs because some of the culverts have insufficient capacity to pass the accumulated storm runoff in an efficient manner. Currently, the City does not intend to construct any new culverts to mitigate this flooding problem. However, the City may add conditions of approval (i.e., new culverts, onsite retention) on future development within the areas upstream of I-10.

Other areas subject to historical natural flooding within the Planning Area include Avenue 45 at Van Buren Street, Highway 111 at Calhoun Street, and Avenues 47 and 48 between the Coachella Valley Stormwater Channel and the Southern Pacific Railroad. The flooding in these areas is primarily due to the combination of poor drainage topography, soils with low infiltration rates, and insufficient local drainage facilities.

The City of Indio does not have a comprehensive drainage system inventory or a systematic maintenance program. Natural drainageways that have been altered by development must rely on continual maintenance to be effective. Such maintenance includes culvert sediment removal, regular storm drain repair, and levee repair. Some of the flash flooding that has occurred in the past may have been accelerated due to irregular maintenance intervals and the lack of a drainage system inventory.

Coachella Valley Stormwater Channel

The CVSWC has a 24-hour time of concentration for the peak stormflows. As previously indicated, the channel is designed for the Standard Project Flood (75,000 cubic feet per second [cfs]) as required by the U.S. Army Corps of Engineers.

The berms (levees) along the stormwater channel are higher than the adjacent natural ground, and the storm drain systems for adjacent properties may be too low to provide positive drainage and function properly when the channel is flowing near capacity. Storm drain systems can be discharged into the stormwater channel, although back flow prevention devices may be required in the design to prevent the stormwater from "backing up" the drains, thus flooding the low lying adjacent ground.

The CVSWC is currently undergoing construction improvements. The side slopes of the channel have

been concrete lined from the City's northwestern boundary to Madison Avenue. There are future plans to continue these improvements throughout the entire length of the stormwater channel, providing additional funds become available. These improvements are currently under the direction of CVWD.

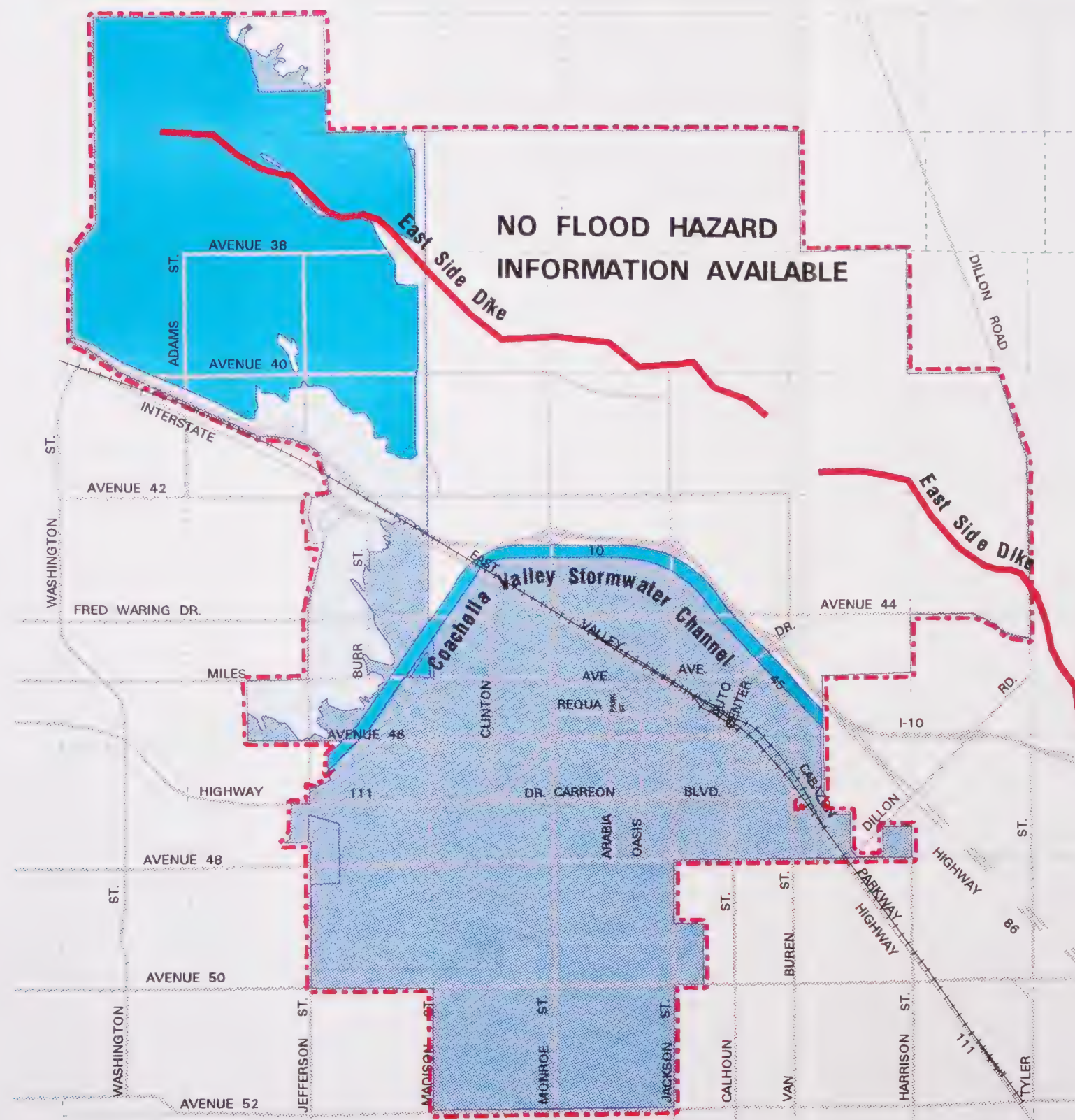
East Side Dike

The East Side Dike was constructed in the late 1940s in an attempt to protect the outlying urban areas from large stormflows. Recently, CVWD and the Bureau of Reclamation contracted with Bechtel Corporation San Francisco to determine the adequacy of the East Side Dike System in containing the Standard Project Flood (SPF) runoff. A standard project flood is the largest known or recorded storm in the area. The storm of September 1939 is the SPF for the Planning Area. The results of the study indicate that the portion of the East Side Dike protecting the Planning Area is adequate to contain the SPF runoff from the tributary watershed. A copy of this report is on file with CVWD.

5.7.2 Flood Safety Programs

FEMA Requirements

The National Flood Insurance Act of 1968 and the Flood Disaster Prevention Act of 1973 established a natural flood insurance program that is administered by FEMA. The national flood insurance program provides insurance coverage to property owners within the flood hazard areas. In order to qualify for this program, communities must file an application and adapt minimum land use and flood control measures for new construction. FEMA prepares FIRMs that identify flood zones and areas that are susceptible to 100- and 500-year floods. It is the City's policy to have building pads elevated 1 foot above grade; consequently, most of the insurance companies have waived flood insurance for the area.



Flood Zone Categories

- Areas of 100-year flood
- Areas between 100-year and 500-year flood (Depths 1" or less)
- Areas of minimal flooding
- Areas of undetermined, but possible, flooding
- Levee

Source: FEMA Flood Insurance Rate Maps
060245-0002 D
060245-1625 B
060245-1650 A
060245-2260 C
060255-0002 D

Figure 5.7-1
FLOOD HAZARDS



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Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

Federal Programs

Both the U.S. Army Corps of Engineers and the Bureau of Reclamation have conducted extensive flood studies within the Coachella Valley basin area. Most of these studies are on file with CVWD.

Regional and State Programs

Regional stormwater programs for the Planning Area include the recently adopted NPDES permit program for stormwater discharge. The Federal Clean Water Act requires that certain industries obtain NPDES permits and the EPA has been attempting to promulgate regulations to comply with the law. The permitting process for the stormwater permits will be conducted by the State Water Resources Control Board and the Regional Water Quality Control Boards. Both the City of Indio and CVWD have begun to study stormwater management plans in order to meet these regulations.

Local Programs

The City of Indio has adopted several flood safety programs and conditions for development within the Planning Area. Some of these requirements include

- ▶ all development projects must retain stormwater runoff onsite via retention facilities and dry well basins until master planned truck facilities are constructed,
- ▶ water level in streets and parking lots may not exceed a depth of 7 inches,
- ▶ 100-year water surface elevation must not encroach within 10 feet of building structures,
- ▶ building pads must be elevated a minimum of 1 foot above surrounding natural ground, and
- ▶ retention facilities must be designed for the 100-year event and water must be drained from basins within 24 hours.

5.8 AIRPORTS

Two airports are in the vicinity of the Indio General Plan Planning Area: the Thermal Airport and the Bermuda Dunes Airport.

5.8.1 Thermal Airport

The Thermal Airport is a general aviation facility located approximately 4.5 miles southeasterly of Indio in County territory. The Riverside County Airport Land Use Commission has recently updated the Airport Master Plan and the Airport Land Use Plan, with the latter only approved in draft form.

The current Thermal Airport Influenced Area includes an area lying within about 1/2 mile of 52nd Avenue on the south of the Indio Planning Area. No portion of the Influenced Area overlies the Planning Area, nor does any designated hazard zone. Consequently, the Riverside County Airport Land Use Commission would not exercise land use authority for any City land use decisions. Also, there would be no land use restrictions needed relative to aircraft operations at Thermal Airport.

Based on the Thermal Airport Master Plan, the facility will grow from about 65,100 operations per year (1988) to about 140,000 operations by the year 2010. The airport's expanded main runway will be oriented in a north/south configuration. This will eliminate the majority of aircraft takeoff and approach flyovers of Indio, which could occur with the airport's current configuration. No portion of the proposed Influenced Area or area of significant safety hazard will overlie land within the City of Indio.

The Thermal Airport has substantial area available for expansion, unlike the Bermuda Dunes Airport. The Thermal Airport is expected to provide a significant amount of the Coachella Valley's future demand for air services, including commuter flight services and air cargo.

5.8.2 Bermuda Dunes Airport

The Bermuda Dunes Airport lies adjacent to the City of Indio boundary on the west. Although the airport property is not within the City, several of the

designated operating zones overlie land within the present and future City boundaries.

The Bermuda Dunes Airport is a privately owned and operated utility and general aviation facility. The airport is located on 110 acres and serves private aircraft, business, commuter, and charter users. The facility's only runway is 5,000 feet long and 70 feet wide, oriented northwest (compass heading of 280 degrees)/southeast (compass heading 100 degrees). The facility can accommodate up through larger business and commuter aircraft and does handle business jet and turboprop aircraft. The facility is open 24 hours per day, and the runway is lighted during night hours. While piston aircraft can take off or land at any hour, there is an 11:00 p.m. to 6:00 a.m. curfew on takeoffs and landings by jet or turbo prop aircraft. The field currently handles approximate 45,000 takeoffs and landings per year. The facility includes 200,000 square feet of paved ramp aircraft parking and approximately 7 acres of turf parking and tiedown. Approximately 80 to 120 aircraft are based at the facility during a typical year. Other onsite facilities include a 15,000-square-foot hangar, office and lobby, and six smaller T-hangars. Businesses that operate out of the airport are presented below.

Operator	Service Provided
Bermuda Air Service	Flight Instruction and Aircraft Rental
Sterling Air	Aircraft Sales
Pacific Coast Airlines	Commuter service between Bullhead City, AZ, Bermuda Dunes, CA and LAX
Payless Rental	Car Rental
Lewis Aircraft Maintenance	Aircraft Maintenance
Bermuda Dunes Airport	Fixed Base Operator, Fuel, Tiedowns, Air Services

According to the airport manager, there are plans to provide one additional large hanger and up to

30 additional T-hangers, primarily to serve existing demand for those facilities. These facilities would take up a minor amount of the acreage onsite. However, the overall shortage of acreage at the site precludes significant future expansion. It is possible that a control tower may be required at some time in the future if the flight operations increase. Growth in flight operations has historically mirrored that of the surrounding communities, and this trend is expected in the future as well. Additionally, there is a hotel site at the airport that, when constructed, will provide airport-related transient lodging.

As a private facility, the Bermuda Dunes Airport receives no government assistance. The current owners have no plans to change the general operational or ownership characteristics of the airport.

5.8.3 Airport Land Use Plan

The County of Riverside Board of Supervisors adopted the Riverside County Airport Land Use Plan on April 26, 1984, and subsequently, the ALUC established the safety areas for the airport. In establishing the safety areas, the ALUC considered the type of airport and operations expected, aircraft flight patterns and altitudes, noise factors, airspace considerations, and approach and departure imaginary surfaces (FAR Part 77 criteria).

The safety areas established for the Bermuda Dunes Airport Land Use Plan are shown on Figure 5.8-1 and described below.

Approach Imaginary and Horizontal Surfaces. As shown on Figure 5.8-1, the approach imaginary surfaces are conical-shaped areas extending out approximately 5,800 feet from both ends of the runway. In these areas, which are defined by Federal regulations (FAR Part 77), a 20- to 1-glide slope is assumed for purposes of regulating the height of objects on the ground. The horizontal imaginary surface is an oval-shaped area that establishes a 150-foot height limitation for ground structures with an adequate buffer for safety. The horizontal surface covers the area where overflight is most prevalent (outside of the approach surface). This would include the airport pattern, or idealized flight path, as shown on Figure 5.8-1.

Area of Significant Safety Concern. Data show that most aircraft flight accidents occur within 1 mile of the airport (Association of Bay Area Governments 1983). This happens because of the critical nature of flight operations within the area which includes takeoff, landing, low-speed or full-power turning movements, changes in power setting, ascent, and descent. The areas of significant safety concern as established by the ALUC are shown on Figure 5.8-1. Approximately one-third of these designated lands lie within the present Indio city limits or Shadow Hills area.

Airport Influenced Area Boundary. The Influenced Area is that area around the airport that is most substantially affected by airport operations relative to factors such as aircraft overflight, safety, noise, and general operations. The ALUC exercises land use review authority for County airports within this area. The Airport Influenced Area boundary is shown on Figure 5.8-1 and contains approximately 5.5 square miles. Approximately 60 percent of the lands within the Airport Influenced Area boundary are within the present Indio city limits or Shadow Hills area.

INDIO FACTS:

*Indio is directly
influenced by the
Bermuda Dunes
Airport.*

5.8.4 Other Airport-Related Land Use Constraints

Noise

One of the more important land use considerations in the vicinity of airports involves examination of noise characteristics from both existing and likely future operations. At smaller general aviation airports such as Bermuda Dunes, significant noise impacts (i.e. sources producing 60-dBA CNEL and above) are commonly limited to the airport property (see Figure 5.8-1 for 60-CNEL noise contour). Twin-engined propeller-driven aircraft and small jet aircraft are the greatest noise producers at general aviation airports, particularly during takeoff. Propeller-driven aircraft are not expected to become significantly

quieter in the future; thus, an increase in operations will cause a corresponding increase in noise impact. Based on the projection of future operations, the 60-CNEL noise contour should not change significantly.

Although significant noise impact from the airport is confined to the near-runway area, experience shows that annoyance from aircraft operations occurs over a wider area in the vicinity of airports (Association of Bay Area Governments 1983). Aircraft overflights in the Airport Influenced Area may be a source of complaints. Data show that sporadic complaints will begin to occur at noise levels of 55-dBA CNEL and above (Ibid.). However, EPA has determined that annoyance will not occur in residential areas at outdoor noise levels below 55 Ldn (roughly equivalent to CNEL; EPA 1973). Measures to protect against potential complaints are included in the Land Use Policy section below.

Schools

In accordance with the California Education Code Section 39005, school sites within 2 miles of an airport runway require an investigation by Caltrans Division of Aeronautics. Historically, schools within 1/2 mile of the departure or arrival path are normally considered incompatible and are usually not approved by Caltrans. Schools proposed between 1/2 and 3/4 mile are very closely studied before receiving approval or disapproval.

Special Planning Considerations

Land use activities may present visual, electronic, or physical hazards to aircraft in flight. Visual hazards include light, glare, or generation of smoke. Electronic hazards include any uses that may emit electronic signals that can interfere with aircraft radio communications. Physical hazards, besides height of structures, are mainly associated with such phenomena as bird strikes or conflicts with other air traffic.

5.8.5 Policy Affecting Land Use Decisions

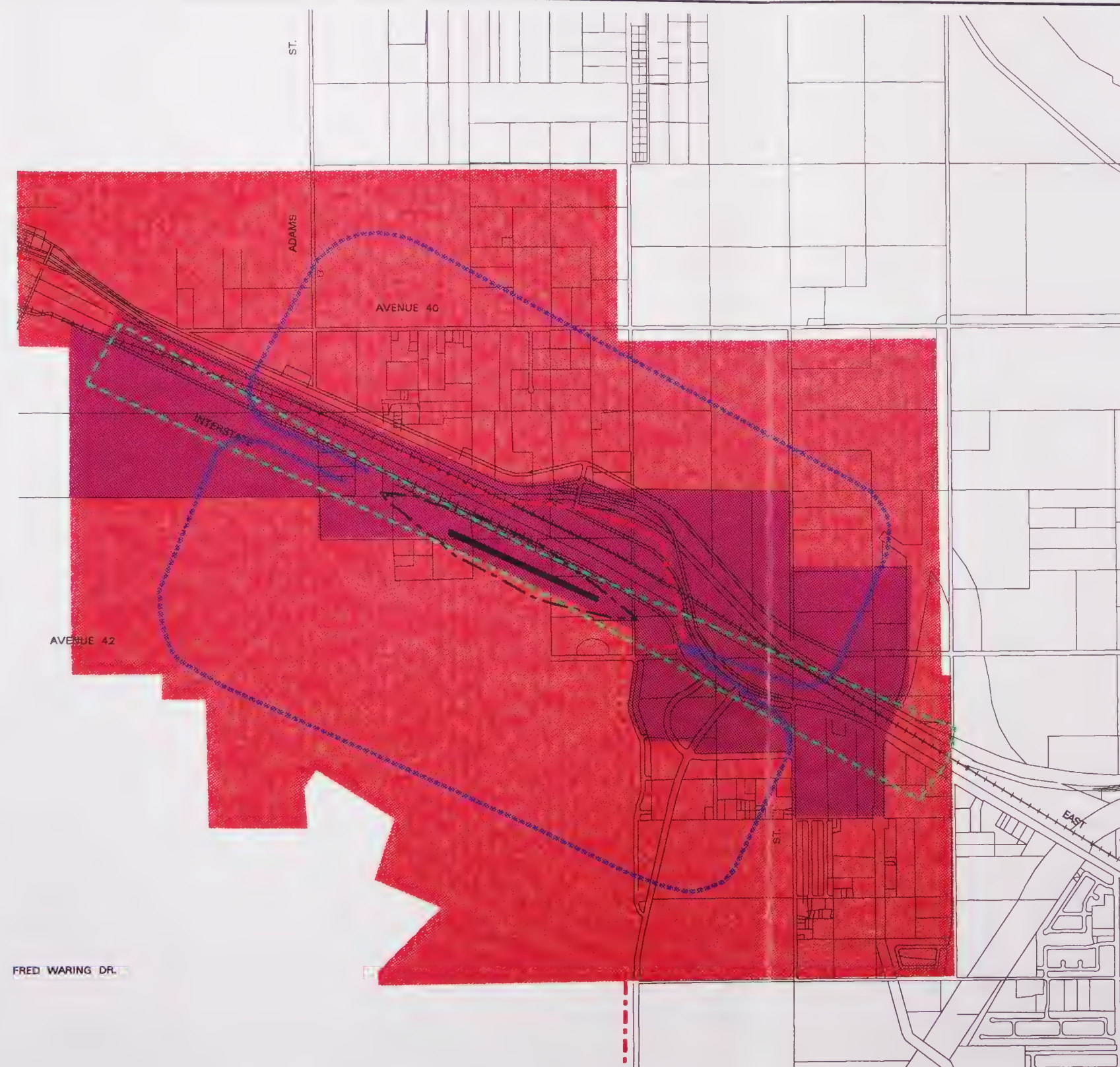
The Bermuda Dunes Airport Land Use Plan establishes policy to guide land use decisions in the Influenced Area. Land use decisions by local agencies are subject to review by the ALUC. The policies that are applicable to lands within the Influenced Area specified in the Bermuda Dunes Airport Land Use Plan (County of Riverside 1986) are listed below and are verbatim from the plan.

Policy 1: The Bermuda Dunes Airport imaginary approach surface shall be kept free of all high-risk land uses. In general, high-risk land uses have one or more of the following characteristics.

- a. High concentration of people.
- b. Critical facilities, and
- c. Flammable or explosive materials.

The following is a list of examples of land uses that have these high-risk characteristics. This list is not complete, and each land use application will be evaluated for its appropriateness given airport flight activities:

- a. Places of Assembly: Auditoriums, churches, schools, carnivals, drive-in theaters, and so forth
- b. High Patronage Services: Bowling alleys, restaurants, theaters, motels, banks, and so forth
- c. Large Retail Outlets: Department stores, supermarkets, drug stores, and so forth
- d. Residential Uses: Lot sizes smaller than 2.5 acres
- e. Critical Facilities: Telephone exchanges, radio/television studios, hospitals; and so forth
- f. Flammable Products: Bulk fuel storage, gasoline and liquid petroleum service stations,



Explanation

- Airport Influence Area
- Area of Significant Safety Concern
- Runway
- 60 CNEL Noise Contour
- Approach Surface
- Idealized Flight Pattern

Figure 5.8-1
AIRPORT PLANNING
CONSTRAINTS



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 1080'



INDIO
GENERAL
PLAN 2020

manufacture of plastics, breweries, feed and flour mills, and so forth

Policy 2: Areas of significant safety concern shall have minimum residential lot size of 2.5 acres. Agricultural, industrial, and commercial uses are acceptable in this area.

Policy 3: Local jurisdictions will be encouraged to obtain aviation easements for all land uses within the Bermuda Dunes Airport Influenced Area. The height of these aviation easements should be from runway ground elevation (69 feet) within the imaginary approach surfaces and from 150 feet above runway ground level elevation throughout the Influenced Area boundary.

In accordance with Section 21676 (b) of the Public Utilities Code, proposed land uses subject to review by the ALUC (General Plan Amendments, Specific Plans, adoption or approval of a Zoning Ordinance or Building Regulation) that fall within the Bermuda Dunes Influenced Area shall be reviewed by the ALUC for a determination of consistency. This determination shall then be forwarded to the requesting agency.

Local jurisdictions are also encouraged to submit other proposed development (Tentative Tracts, Plot Plans) that fall within the Bermuda Dunes Airport Influenced Area boundary for review and recommendation as to consistency with this Plan to help ensure land use compatibility with the Bermuda Dunes Airport operations. Land uses that produce glare, direct illumination, vapor, smoke, and dust that may affect airport operations shall be discouraged. Likewise, uses that would conflict or potentially conflict with the airport in terms of noise sensitivity and safety hazards

are discouraged from locating in the vicinity of the airport.

Policy 4: New housing to be constructed within the 60-CNEL noise level contour shall be provided with soundproofing in order to achieve an interior annual noise level, attributable to exterior sources, not to exceed 45 CNEL.

HOUSING

6.1 EXISTING HOUSING ELEMENT

State Housing Element law requires communities to evaluate their previous element's achievements under adopted housing programs as part of the 5-year update to their housing elements. The results should be quantified where possible (e.g., mitigation of governmental constraints).

The goals and policies of the previous housing element were evaluated and found to be appropriate for the City in 1989. However, due to the changes and increasing diversity of the City, new goals and policies have been developed to focus on meeting existing housing needs to include the housing needs of low- and moderate-income persons, seniors, persons with disabilities, homeless, and large family households. The preservation of existing residential neighborhoods is also seen as important need. These updated goals and policies are located in Section 6 of the Goals and Policies portion of this document.

The programs used in the previous housing element were also evaluated, and although they would have implemented previous goals and policies, many were unsuccessful due to lack of implementation. In developing the programs for this housing element, the previous programs that were unsuccessful were analyzed and different approaches were taken.

The 1989 Indio Housing Element contains a series of action statements listed under the following five headings: Housing Opportunity/Accessibility, Adequate Provision of Housing, Provision of Adequate Housing Sites, Preservation of Housing and Neighborhoods, and Housing Assistance for Special Needs Groups. Action statements implemented by the City are listed below and are organized under the five headings discussed previously.

6.1.1 Housing Opportunity/Accessibility

- ▶ The City has continued its fair housing complaint and referral service. Referrals are currently made to Code Enforcement.

6.1.2 Adequate Provision of Housing

- ▶ The City has maintained zoning regulations that permit a wide range of housing types: single-family, multifamily, mobile homes, and densities from minimum lot sizes of 15,000 square feet in the R-1-15 zone to 27 dwelling units per acre in the R-4 zone. Mobile homes are conditionally permitted in all residential zones, except the Residential Office zone where they are not appropriate.
- ▶ The City currently meets state standards for processing times and has developed a fast track permit process for the City's Enterprise Zone.
- ▶ The City has prepared and maintained accurate data regarding planning and building activity on a quarterly basis and has made this information available at the Community Development Department.
- ▶ The City has continued to contract with the Riverside County Housing Authority to administer the Section 8 and comparable rental assistance programs in Indio.
- ▶ The City has adopted the State Density Bonus Law by ordinance for affordable housing and incorporated it into the City Code.
- ▶ The City continues to conditionally permit mobile homes in all residential zones except the Residential Office zone.

HOUSING

- ▶ The City actively assisted in a count of homeless persons within the community for the 1990 U.S. Census to help determine future housing needs for these persons.
- ▶ The City has increased its Code Enforcement staff by one part-time (20 hours per week) officer to help in the prevention of neighborhood deterioration.
- ▶ The City has worked with applicants of affordable housing projects to coordinate application procedures to facilitate the development of affordable housing.

order to ensure a healthful and safe living environment.

6.1.5 Housing Assistance for Special Needs Groups

- ▶ The City has had discussions with Martha's Kitchen, which is planning to open a homeless shelter next year in the City and is currently looking for an appropriate site.

6.1.3 Provision of Adequate Housing Sites

- ▶ The City has documented the inventory of General Plan and zoning designations as they relate to vacant developable sites twice since the adoption of the previous housing element and made these available to the public by request.
- ▶ As part of the General Plan Update in 1993, guidelines were developed for the placement of apartments in the Land Use Element to allow for easier decision making in the placement of apartment units.

6.1.4 Preservation of Housing and Neighborhoods

- ▶ A Specific Plan was prepared for the undeveloped area north of I-10 to provide additional guidance in the planning of this area.
- ▶ The City has annexed 1,800 acres since 1989 to allow for growth and additional sites for residential development.
- ▶ The City initiated a \$5-million assessment district north of I-10 for the provision of sewer and water lines to help facilitate residential development.
- ▶ The City has initiated an aggressive nuisance abatement program focused on graffiti removal and abandoned vehicles and allots 16 hours of personnel time per week on these activities in

6.2 HOUSING MARKET OVERVIEW

6.2.1 Population and Household Trends

According to the U.S. Census Bureau, between the years 1980 and 1990 the population of Indio increased 70 percent from 21,611 in 1980 to 36,793 in 1990, a total increase of 15,182 persons, with an average increase per year of 1,518 or 7 percent. This was an increase in the population growth rate seen in the community for the previous decades, as seen in Table 6.2-1. During the 1960s and 1970s, the population grew a steady 48 percent.

INDIO FACTS: *According to the 1990 Census, there are 10,747 households in Indio.*

The ethnic breakdown of the City is relatively diverse and is depicted in Table 6.2-2. From 1980 to 1990, the number of persons of Hispanic origin residing in the City increased from 12,152 to 25,068, and now accounts for 68 percent of the population (see Figure 6.2-1 for distribution). The majority of the citizens of Indio are of Hispanic origin.

The demand for housing units is driven by the number of households. The number of households according to the Census in 1990 was 10,747, with an average persons per household of 3.4, an increase from CVAG's 1980 figure of 3.2 persons per household. Household growth is on the rise and creates an increasingly important market for larger single-family and multifamily dwelling units.

The household makeup of the community consists primarily of families (77 percent). Table 6.2-3 presents the household types represented in Indio.

Indio has historically been characterized as a community of younger people. The median age in 1990 was 26.3 years, up from 25 years in 1980. The increase in persons per household may be due in part to recent trends of increasing household sizes not only due to the addition of new children but also due to young adults who are less able to leave

home. A factor contributing to higher median ages is the national trend of increases in the senior population.

The 1980s showed an increase in population in Indio, substantially higher than the previous two decades. However, the increase in dwelling units has not caught up with the increase in population in the last decade. Population increased 70 percent and new dwelling units were up 61 percent. Housing construction has not caught up with the increases in population growth.

INDIO FACTS: *Less than 2% of Indio's housing stock was built before 1940.*

6.2.2 Housing Trends

Housing development in Indio is almost entirely a post 1940 occurrence with less than 2 percent of the housing stock built prior to 1940 (see Table 6.2-4 for more detailed information on the age of housing units in the community).

According to CVAG's figures for June 1991, Indio has a total of 14,536 dwelling units that are broken down into a summary of types of dwelling units in Table 6.2-5. Dwelling units are divided almost equally between single-family and multifamily units with 40 percent single-family units and 44 percent multifamily dwelling units, comprised of both apartments and condominiums. Mobile homes make up a considerable proportion (9 percent) of the housing stock.

The City of Indio has experienced continuous housing growth, with an average of 431 new units constructed annually between 1970 and 1990 (low of one unit in 1975 and again in 1976 and peak of 1,159 in 1980) (see Table 6.2-6). The total number of housing units had increased to 13,028 by 1990. As of June 1991, the total is up to 14,536.

Another characteristic of the City's housing stock is the ratio of rental units to owner-occupied units and their distribution throughout the City. The 1990 Census indicated that out of the total number of

Table 6.2-1

POPULATION TRENDS - INDIO

1960	1970	1980	1990
9,745	14,459	21,611	36,793
Source: Census Bureau			

Table 6.2-2

CITY OF INDIO ETHNIC COMPOSITION: 1990

Race/Ethnicity	Number of Persons	Percent of Population
White	20,045	54.5
Black	1,482	4.0
Asian	588	1.6
Other	14,678	39.9
Total	36,793	100.0
Spanish/Hispanic Origin	25,068	68.1
Source: 1990 Census		

Table 6.2-3

CITY OF INDIO HOUSEHOLD TYPE: 1990

Household Type	Number of Households	Percent of Total
Families	8,249	76.8
Singles	1,995	18.5
Other	503	4.7
Total	10,747	100.0
Source: 1990 Census		

Table 6.2-4

AGE OF HOUSING UNITS

Years Built	Number*	Percent of Stock
1989 - June 1991	1,267	10
1984 - 88	3,219	24
1979 - 83	2,046	15
1970 - 78	1,658	13
1960 - 69	2,760	21
1950 - 59	1,511	11
1940 - 49	498	4
1939 +	295	2
Total	13,254	100

* Does not include mobile home units or spaces

Source: CVAG and Bureau of the Census

Table 6.2-5

SUMMARY OF DWELLING UNITS

	Number	Percent
Apartments	4,463	31
Condominium	1,952	13
Single-Family Dwelling	5,827	40
Mobilehome	1,282	9
Other	1,012	7
Total	14,536	100

Source: CVAG June 30, 1991

Table 6.2-6

INDIO HOUSING TRENDS

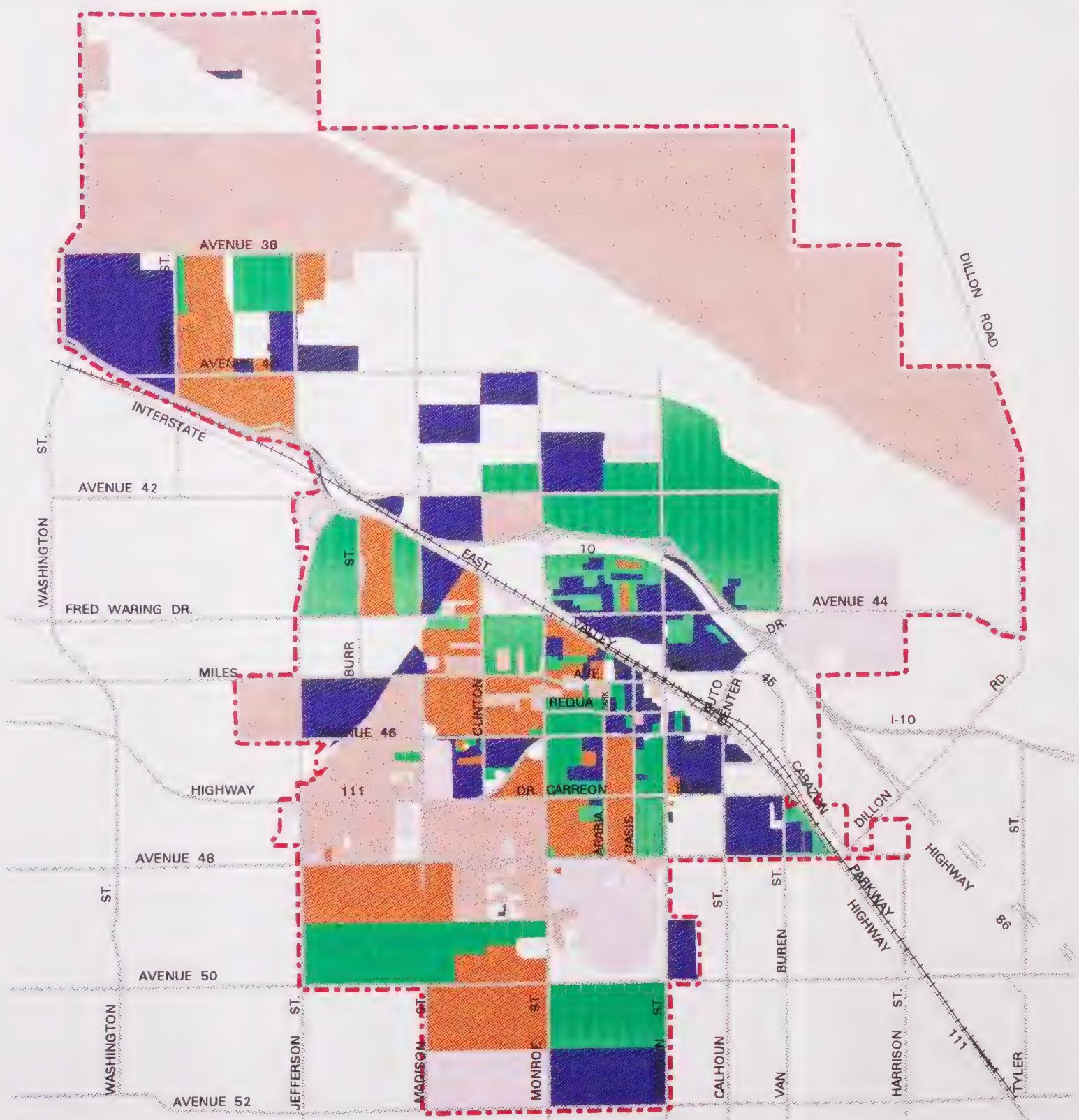
Number of Housing Units		Percent Increase
1980	1990	
7,988	13,028	63

Source: 1980 & 1990 Census

HOUSING

occupied units, 5,270 (49 percent) are owner occupied and 5,477 (51 percent) are renter occupied (see Table 6.2-7). The distribution between renters and owners in Indio is split almost equally.


The vacancy rate within a given housing market may serve as an indicator of the availability of housing. However, there are some inherent problems with using a vacancy rate as a catch all to address availability because this rate does not address housing types, sizes, price ranges, or locations and may actually cover up housing shortages in certain sectors of the housing market. The Census Bureau indicates Indio's vacancy rate in 1990 to be 17.5 percent, which is an increase of .5 percent from the 1980 Census figure of 17 percent (see Table 6.2-8).



Percent Hispanic

- None
- 1% to 20%
- 20% to 40%
- 40% to 60%
- 60% to 80%
- More than 80%

Figure 6.2-1
1990 CENSUS
HISPANIC PERCENTAGE

 **Chambers Group, Inc.**
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical


1" = 6000'



INDIO
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Table 6.2-7

HOUSING CHARACTERISTICS

	Number	Percent
Occupancy Status		
Occupied	12,343	83.0
Vacant	2,524	17.0
Total	14,867	100.0
Tenure		
Owner Occupied	6,218	50.4
Renter Occupied	6,125	49.6
Total	12,343	100.0
Source: 1990 Census for PA*		
PA = Planning Area, which includes city's sphere of influence in addition to the City limits		

Table 6.2-8

VACANCY STATUS

	Number	Percent
For rent	560	22
For sale only	377	15
Rented or sold, not occupied	136	5
For seasonal, recreational, or occasional use	1,005	40
For migrant workers	13	1
Other vacant	433	17
Total	2,524	100
Source: 1990 Census for PA*		
PA = Planning Area, which includes City's sphere of influence in addition to the City limits.		

6.3 ASSESSMENT OF HOUSING NEED

Housing availability is of vital statewide importance, and the attainment of decent housing and a suitable living environment for every family is a statewide priority. The attainment of this goal requires the cooperation of both the public and private sectors in order to increase housing opportunities for all.

The assessment of housing need is an important aspect for the development of the housing element. It is critical to analyze the needs of the various segments of the population, both existing and future, in order to direct new programs to answer these needs. Certain groups of the population have special housing needs that should be addressed, and only through investigation of these groups can housing strategies be implemented.

6.3.1 Existing Housing Need

Existing housing need will be discussed under the following areas: lower income households overpaying for housing, housing stock conditions, special housing needs groups, and overcrowded households.

Lower Income Households Overpaying for Housing

The Department of Housing and Community Development (HCD) determines a household to be in need of housing assistance if its annual income is 80 percent or less than the county median and it pays an inordinate share of that income, defined as greater than 30 percent, on housing costs. The very low income category is considered 50 percent or less of the county median income level, with the low income category ranging from 50 to 80 percent of the countywide median figure. Combined, these categories constitute the lower income classification and represent those who are least able to afford shelter (see Table 6.3-1). The low-moderate income category is comprised of households earning over 80 percent and not more than 100 percent of the county median income. High moderate income consists of households earning over 100 percent and not more than 120 percent of the county median

income. These last two categories when combined comprise the moderate income classification. According to the 1990 Census, 6,739 (63 percent) of the total 10,650 households in Indio were low-income households. Housing overpayment is defined by HCD as having to pay more than 30 percent of gross income for housing (see Table 6.3-2). Over half (52 percent) of the lower income households overpay for housing costs. See Table 6.3-3 for information on very low and low-income households overpaying for housing costs. The vast majority of this category are renters (74 percent). Table 6.3-4 shows housing overpayment for Indio in relation to other communities in the Coachella Valley. Estimated affordable rents are presented in Table 6.3-5. A need for more affordable housing exists in the community to decrease the extent of households overpaying for housing costs.

Housing Stock Conditions

Because the majority of Indio housing units are relatively new, few were found to be unsuitable for habitation. Approximately 455 residential structures were found to be substandard by the city in 1989. Of these, there are about 120 that are not appropriate for rehabilitation, based on staff determination of historical data.

Special Housing Needs Groups

HCD requires that housing elements include an analysis of special housing needs groups including persons with disabilities, elderly, large family households, farm workers, single-parent households, and the homeless (see Table 6.3-6).

According to the 1990 Census, there are approximately 412 persons residing in the City with mobility or self-care limitations. The housing needs of persons with disabilities vary widely. In general, additional facilities may include handicap ramps, wider doors, and handrails. Elevators are needed for any units not located at ground level. Group homes may be necessary for the severely disabled who cannot care for themselves.

The elderly, defined as persons 65 years and older, consists of 1,850 elderly headed households or

Table 6.3-1
INCOME LIMITS
RIVERSIDE COUNTY - MAY 1993

Income Level	Annual Household Income By Household Size							
	1 Person	2 Persons	3 Persons	4 Persons	5 Persons	6 Persons	7 Persons	8 Persons
Very Low Income (below 50% of Median)	\$14,400	\$16,450	\$18,500	\$20,550	\$22,200	\$23,850	\$25,500	\$27,150
Lower Income (50% - 80% of Median)	\$23,000	\$26,300	\$29,600	\$32,900	\$35,500	\$38,150	\$40,750	\$43,400
Median Income*	\$28,750	\$32,900	\$37,000	\$41,100	\$44,400	\$47,700	\$50,950	\$54,250
Moderate Income (80% - 120% of Median)	\$34,500	\$39,450	\$44,350	\$49,300	\$53,250	\$57,200	\$61,150	\$65,100
* Area Median: \$41,100 Source: Department of Housing and Community Development								

Table 6.3-2

HOUSING OVERPAYMENTS

Income/Cost	Total Households		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent
Less than \$10,000, Spent 30% or more	1,017	29	167	16	850	35
\$10,000 - \$19,999, Spent 30% or more	1,468	42	182	17	1,286	52
\$20,000 - \$34,999, Spent 30% or more	815	23	524	48	291	12
\$35,000 - \$49,999, Spent 30% or more	187	5	161	15	26	1
\$50,000 and more Spent 30% more	42	1	42	4	0	0
Total	3,259	100	1,076	100	2,453	100
Source: 1990 Census						

Table 6.3-3

VERY LOW AND LOW-INCOME HOUSEHOLDS OVERPAYMENT

	Total		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent
Very Low Income Households Spent 30% or more	2,485	75	349	11	2,136	65
Low-Income Households Spent 30% or more	815	25	524	16	291	9
Total	3,300	100	873	27	2,427	74
Source: 1990 Census						

Table 6.3-4

OVERPAYING HOUSEHOLDS IN COACHELLA VALLEY

Coachella	20.4%
Desert Hot Springs	24.1%
Indian Wells	6.3%
Indio	19.6%
La Quinta	18.9%
Palm Desert	14.6%
Palm Springs	17.6%
Rancho Mirage	9.6%

Source: SCAG RHNA, June 1988

Table 6.3-5
**ESTIMATED RENTS: AFFORDABLE RENTS OR MONTHLY PAYMENTS
RENT RATE PER MONTH**

30% of Income	1 Person	2 Persons	3 Persons	4 Persons	5 Persons	6 Persons	7 Persons	8 Persons
Very Low Income	\$360	\$411	\$462	\$514	\$555	\$596	\$638	\$679
Lower Income	\$575	\$657	\$740	\$822	\$887	\$954	\$1,019	\$1,085
Median Income	\$719	\$822	\$925	\$1,028	\$1,110	\$1,193	\$1,274	\$1,356
Moderate Income	\$863	\$986	\$1,109	\$1,232	\$1,331	\$1,430	\$1,529	\$1,628
Source: Department of Housing and Community Development								

Table 6.3-6

SPECIAL HOUSING NEED GROUPS

Needs Group	Renter		Owner		Total
	#	%	#	%	
Elderly Households (65+)	628	34	1,222	66	1,850
Large Households (5+)	1,494	55	1,222	45	2,716
Severely Large Households (6+)	864	57	641	43	1,505
Persons with Work Disability or Self-Care	---	---	---	---	1,875
Person with Mobility Limitation	---	---	---	---	412
Single Parent with Children Household	---	---	---	---	2,247
Farm Workers	---	---	---	---	2,127
Homeless*	---	---	---	---	631

Source: 1990 Census

* Riverside County Department of Community Action's Comprehensive Plan for 1991-92

HOUSING

17 percent of Indio's households are headed by seniors. The elderly have special housing needs due mainly to two factors: most are living on a fixed income and many have decreased mobility. Seniors in Indio actually have a lower percentage of persons below the poverty level (14.8 percent) than the community as a whole (21.1 percent). Seniors generally have less access to private transportation and need to rely more heavily on public transit.

Large family households are defined as family households containing five or more family members (see Figure 6.3-1 for distribution). In 1990, according to the U.S. Census, there were 2,716 large family households within the City, consisting of 26 percent of all households (see Table 6.3-7). Large family households create special problems concerning housing issues. Many times it is difficult for families of this size to find adequate housing due to the space they require. Finding adequate housing is especially difficult for renters due to the lack of larger apartment spaces available. Finding an apartment with more than three bedrooms can be difficult in any community, and this is typical of the problems faced by large family households. This group is also the most likely to experience overcrowding. Large family households also may have increased difficulties finding suitable housing that is affordable. The City is currently lacking in rental units for large families.

The housing needs of agricultural workers are compounded by their generally very low wages and the transient nature of their employment. According to the 1990 Census, 2,127 persons were employed in agriculture, consisting of 14 percent of the workforce. Although Indio's employment base is shifting away from this area, the importance of agriculture is still felt in the Coachella Valley. The California Rural Legal Assistance Coachella Migrant Project has determined 5,000 migrant farmworkers work in the Coachella Valley and they estimate 80 percent of those are underhoused. The peak period for migrant farmworkers in the region is during the grape harvest season (May through July) when 30,000 are working in the Coachella Valley. The Fred Young Farm Labor Camp located in Indio provides 253 family housing units and is a tenant-operated property. Another housing project for agricultural workers was recently approved in Indio. The 88-unit project will contain 36 units of senior housing for retired agricultural workers, and the

remaining 52 units are for families, ranging from studio to four-bedroom apartments.

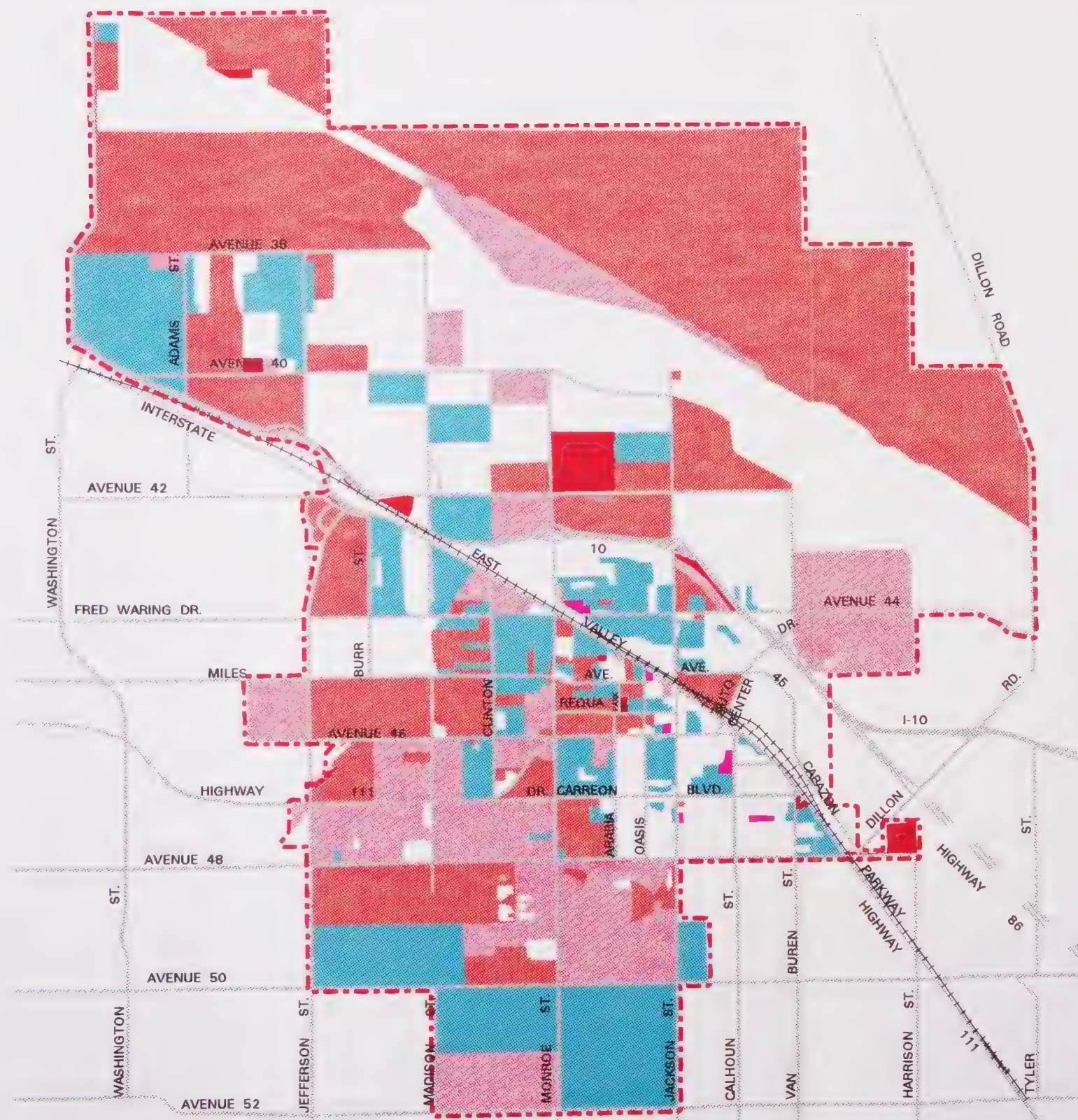
The 1990 Census identified 2,247 single-parent headed households, accounting for 21 percent of the total households (see Table 6.3-8). Of these single-parent headed households, 1,144 or 72 percent are female-headed households. Female-headed households have a high likelihood to fall into the low-income categories and have a difficult time finding affordable housing.

Homelessness is a problem being faced by most every community and has recently been exacerbated by poor economic conditions of the southern California region and decreased expenditures for programs to aid the homeless. The homeless are predominantly made up of single males; however, services to aid homeless primarily focus on women and children. According to the Riverside County Department of Community Action's Comprehensive Homeless Plan for 1991-1992, 631 persons in Indio were estimated to be homeless or 1.7 percent of the total population.

A survey of groups that provide shelter to the homeless was conducted in 1992-1993 to help determine existing needs. The following facilities were contacted and the services they provide are described.

Catholic Charities administers the Nightingale Manor Shelter Residence, which is jointly funded between Riverside County Housing Authority and Catholic Charities that provided shelter for 49 families during 1992. The 40-bed family shelter provides food, clothing, and emergency shelter. Catholic Charities provides assistance for families only. The families were almost equally split between white and hispanic origin, with one family each listed under the categories of black, American Indian, Filipino, and other. They were all lower income households with incomes less than \$15,000 per year and were primarily female-headed households or unemployed, with a few listed as disabled or displaced workers.

The Coachella Valley Rescue Mission recently changed directors. Records were not available prior to the current director. However, records were kept for the month of January 1993 and are listed in Table 6.3-9. The Rescue Mission serves Indio and the surrounding communities. The vast majority of those helped by this shelter are single males.



Persons per Housing Unit

- None
- Less than 2
Persons per Occupied
Housing Unit
- 2 to 3
Persons per Occupied
Housing Unit
- 3 to 4
Persons per Occupied
Housing Unit
- 4 to 5
Persons per Occupied
Housing Unit
- 6 or More
Persons per Occupied
Housing Unit

Figure 6.3-1
1990 CENSUS PERSONS PER
OCCUPIED HOUSING UNIT



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'



INDIO
GENERAL
PLAN 2020

Table 6.3-7
HOUSEHOLD TYPES

Family Households			Nonfamily Households		
	Number	Percent		Number	Percent
			1 Person	1,995	79.9
2 Persons	2,240	27	2 Persons	337	13.5
3 Persons	1,598	19	3 Persons	81	3.2
4 Persons	1,732	21	4 Persons	48	1.9
5 Persons	1,189	14	5 Persons	22	.9
6 Persons	698	9	6 Persons	7	.3
7 Persons	792	10	7 Persons	8	.3
Total	8,249	100		2,498	100.0

Source: 1990 Census

Table 6.3-8
SINGLE-PARENT HOUSEHOLDS

	Number	Percent
Female householder with children (No husband present)		
With related children	1,144	51
No related children	380	17
Male householder with children (No wife present)		
With related children	456	20
No related children	267	12
Total single parent households	2,247	100

Source: 1990 Census

Table 6.3-9

**SERVICES PROVIDED BY COACHELLA VALLEY
RESCUE MISSION FOR JANUARY 1993**

Meals Served	1,800
Nights Lodging	446
Showers/Shaves	476
Clothing issued	30
Women/families	92
Food packages	490
Total Services provided	3,334
Source: Jesse Romadro, Director, 1993	

The County of Riverside Mental Health Office runs the Desert Community Mental Health Center in Indio, which provides services to the mentally ill and can house up to 12 persons. During the fiscal year, July 1991 through June 1992, the total number of homeless and mentally ill persons served was 582. This number may include repeat persons who returned for more than one service.

Martha's Kitchen, which is administered by Our Lady of Perpetual Help, provides meals and clothing to the homeless. Martha's Kitchen conducted a survey of those who came for their services from December 17, 1992, to January 4, 1993. A total of 681 families were counted in the survey, 144 of whom stated they were homeless and 114 did not declare residency status. These data were not cumulative, and no repeat families were counted.

**INDIO
FACTS:** *582 persons in Indio
are estimated to be
homeless, or 1.7%
of the total
population.*

The National Guard Armory is used as a shelter during the winter months. The Armory is only open during nights when the temperature is below 40°F, or below 50°F with a 50-percent chance of rain. The maximum number the facility can shelter is 125. As of December 30, 1992, the highest number of attendance was 76, with the low being 6. Generally, when they are open, attendance is not less than 45. Occasionally a family or single female will come, but the overwhelming majority are single males. The County of Riverside provides funding through the state. The state has plans to terminate the use of the armories as shelters for the homeless. Funds will be provided to local governments in the amount that it costs the state to maintain the armory as a shelter. However, this funding would not be sufficient to replace the existing facility.

The Salvation Army administers a shelter in Palm Springs. It provides emergency food, lodging (1 or 2 days only), and referral to other agencies nearby. Clothing needs are referred to Riverside. Emergency financial services to prevent eviction and turnoff services are also provided. The shelter

provides housing for approximately 15 families per month.

St. John's Episcopal Church in Indio is investigating starting a shelter for the homeless, Desert Community Services, which is modeled after the Episcopal Community Services in San Diego due to the number of people coming to them in need of shelter.

Jewish Family Services provides services to the homeless, mostly mentally ill, for approximately two to five nights per month. Other services provided by this group include support services for the elderly, counseling, crisis intervention, and information referral services for the elderly, families, and individuals. Specialized counseling for the elderly includes assessment and planning for residential and nursing home care. Services are available to the local community.

The Department of Social Services for Riverside County operates an office in Palm Springs. Its primary service is handing out motel vouchers for a maximum of 16 nights. Only two motels in the area currently accept the vouchers due to past problems with property damage.

Throughout the survey of providers to the homeless, one common theme was evident: there is a real need for additional shelter providers for the homeless. Numbers of homeless are increasing, and funding for shelters and other services is decreasing. Many of the shelters are overcrowded and have to turn homeless persons away. Single males are the least served by the system and the most prevalent. The closing of the armory is going to further aggravate the problem for the homeless in finding shelter, especially for single males.

Overcrowded Households

Overcrowding is defined by the State of California as a dwelling unit in which there is more than 1 person per room, excluding bathrooms. Severe overcrowding is defined as a dwelling with more than 2 persons per room. Overcrowding results when households are not able to find a large enough unit that is affordable, or in the case of large families, a unit that has enough room for all family members. Table 6.3-10 indicates the number of units and

Table 6.3-10

PERSONS PER ROOM AND OVERCROWDED HOUSEHOLDS

	Owner		Renter		Total Households	
	#	%	#	%	#	%
0.5 or less	2,625	24	1,517	14	4,142	39
0.51 to 1.00	1,795	17	1,626	15	3,421	32
1.01 to 1.50	437	4	683	6	1,120	10
1.51 to 2.00	276	3	704	7	980	9
2.01 or more	137	1	947	9	1,084	10
Total	5,270	49	5,477	51	10,747	100
Overcrowded*	850	8	2,334	22	3,184	30
Severely Overcrowded**	137	1	947	9	1,084	10
Source: 1990 Census						
* Greater than 1 person per room						
** Greater than 2 persons per room						

percentage of overcrowded units in the City as determined by the 1990 Census. A total of 3,184 overcrowded housing units are located in the City, which comprises 30 percent of the total occupied housing units. Thirty percent of the overcrowded units are severely overcrowded. Indio has the second highest rate of overcrowding in the County of Riverside, second only to the City of Coachella. More affordable housing, specifically for larger families, is needed to solve this problem and should be a priority with the City. Renters typically are faced with more instances of overcrowding because a smaller proportion of rental units can accommodate large families. Affordability is an important factor contributing to overcrowding.

HOUSING

6.4 HOUSING CONSTRAINTS

This section discusses the various factors affecting costs and availability of housing in the community. Housing constraints can be further defined as those resulting from the City's regulations (governmental constraints) or from inequities in the housing market (nongovernmental constraints).

6.4.1 Governmental Constraints

Housing prices and availability are affected by various factors including those actions taken by both the public and private sectors. This section discusses actions by government that affect housing costs and availability. Land use controls, codes and enforcement, onsite/offsite improvements, fees and exactions, processing and permit procedures, and other governmental constraints are discussed in the following sections.

Land Use Controls

The Indio General Plan allows for a wide range of residential opportunities. These documents also provide a list of specifications for residential development. The Indio General Plan provides for 12,668 acres of residential uses, comprising 48 percent of the total Planning Area. General Plan residential land use designations include the following and are discussed in further detail in Section 3.1 of the Goals and Policies document.

- ▶ Equestrian Estates (EE) - Permits large lot estate uses which allow the keeping of horses,
- ▶ Country Estates (CE) - Allows for large lot estate uses,
- ▶ Residential Low Density (RL) - Allows for single-family residential uses,
- ▶ Residential Medium Density (RM) - Permits the development of single family attached units, and
- ▶ Residential High Density (RH) - Allows for multifamily projects.

Village Core (VC) designation requires a mix of multifamily, neighborhood commercial, and recreation uses. The Mixed Use (Development

Agreement) (MU[DA]) and Mixed Use (Specific Plan) (MU[SP]), and Downtown Commerce (DC) designations all have residential components which allow for a percentage of the total land area to be used for residential uses.

The City also has large areas of the community with a Residential Planned Development (RPD) overlay designation. This designation allows for increased residential densities in exchange for additional amenities and recreational opportunities.

The MHPD or Mobile Home Park Planned Development Zone is intended to provide specific zoning regulations for mobile home parks and encourage the development of master planned mobile home parks.

The City's existing Development Code is currently being updated for consistency with the new General Plan. Restrictions on land use in the City's existing Development Code are listed below.

Granny flats are conditionally permitted in the Single Family Zone subject to the following conditions:

- (1) Restrictions of Government Code Section 65882.1: except addition to the unit may not exceed ten percent of the existing living area,
- (2) Only shared utility meters shall be allowed,
- (3) Architectural review is required.

Currently, under the existing Development Code, mobile homes are conditionally permitted in the Single Family Zone and Multiple Family Zones and must be permanently affixed to an approved foundation system and certified under the National Mobile Home Construction and Safety Standards Act of 1974. An implementation measure has been included in the Goals and Policies section under Housing to ensure policies regarding mobile homes are consistent with state law.

A single-family unit can be constructed in a zone where it is permitted with a building permit. Tentative Tract Maps are referred to the City Council as a nonhearing item and go through Design Review. Granny flats require a Conditional Use Permit in most residential zones and are reviewed by the Planning Commission. The development of condominiums requires Design Review where they

are permitted. Apartment conversions to condominiums where part of a Planned Development, require modification to the Planned Development, at staff review level. If condominiums are not part of a Planned Development and all codes are met, nothing additional is required. Tentative Parcel Maps are reviewed at the staff level. The City has standardized its processing time and all of the above discussed processes require 60 to 90 days. Most environmental work is handled at the Tentative Tract level and requires additional time.

The City Council and Planning Commission have developed two policies for new residential development. Earth tone roof tiles and block walls fronting streets between residences are both required pursuant to these policies.

The City requires two parking spaces for each single-family unit. Studio and one bedroom multifamily units require one and one-half spaces of which one shall be covered. Two bedroom and greater multifamily units require two parking spaces, of which one shall be covered.

Fees and Exactions

The City has recently amended its various fees and exactions to ensure that they cover the costs of processing projects and permits and providing community services and utilities. The City's fee schedule is presented in Table 6.4-1. Housing unit fee estimates are shown in Table 6.4-2. In addition to fees collected by the City, the DSUSD and CVUSD both exact their own fees on development within their boundaries. Developer impact fees for schools are presently formulated using the state funding mechanism in AB 2926. These amounts are \$1.65 per square foot for residential development.

Building Code

The City of Indio has adopted the Uniform Building Code (1988) with state mandated amendments. The Uniform Building Code governs the erection, construction, enlargement, alteration, repaint, moving, removal, conversion, demolition, occupancy, equipment, use, height, area, and maintenance of buildings or structures in the City of Indio. The City's Code Enforcement Officers enforce the building code through the issuance of citations. The Building Code

does place additional cost burdens on the development of affordable housing projects. However, these are deemed necessary.

Infrastructure

The provision of adequate infrastructure including but not limited to water, sewer lines, storm drains, roadways, street lighting, sidewalks, and bike trails are additional costs to be provided by the developer. Most areas within the City are currently served by major infrastructure; however, newly annexed areas and the fringe areas of the community are in need of major infrastructure components. The cost of these facilities is borne by the developer and is usually passed on to the consumer through higher housing prices.

Downzoning

The General Plan proposes a decrease in the maximum allowed density cover the previous General Plan from a maximum of 34 dwelling units per acre to a maximum of 20 units per acre. This downzoning of residential densities will have an effect on the development of affordable housing projects, as well as the maintenance or conservation of the City's existing affordable housing stock. However, this effect is minimized through policies and implementation measures in the Government portion of the Goals and Policies document addressing the grandfathering of existing, nonconforming uses. Few projects exist in the City that exceed the current maximum of 20 dwelling units per acre and none have been built to the maximum of 34 units per acre. Due to the relatively low land costs, densities above 20 units per acre are traditionally not built in the area, since the cost of building construction rises rapidly with multistory construction and subterranean parking.

6.4.2 Nongovernmental Constraints

Market constraints to housing are the primary problems facing affordable housing. These constraints include construction costs, land costs, and financing and are discussed in this section.

Table 6.4-1
DEVELOPMENT FEES

Application		Fees
Zoning	Change of Zone	\$430
	Conditional Use Permit	\$345 + \$17/acre
	Variance	\$215
	Design Review	\$345 + 17/acre
	General Plan Amendment	\$500
	Planned Development	\$1,500 + \$10/acre
	Specific Plan Amendment	\$600
Subdivision	Tentative Tract Map	\$750 + 40/acre
	Tentative Parcel Map	\$475
	Modification of Tentative Map	\$180 + \$30/acre
	Final Tract Map	\$600 + \$15/lot
	Tentative Parcel Map/Lot Merger	\$475
	Final Parcel Map	\$350 + \$35/lot
	Reversion to Acreage	\$580
	Lot Line Adjustment	\$380
Environmental	Certificate of Compliance	\$210
	Environmental Assessment	\$385
Building & Park & Recreation Capital Impact Fee	Environmental Impact Report	\$2,030
	Single-Family Residential Condominium, Apartment, Townhouses, Duplexes, and Mobile Home Spaces	\$350/unit
	Recreational Vehicle Spaces	\$350/unit
	Commercial	\$175/unit
	Industrial	\$.10/sq.ft.
		\$.03/sq.ft. gross floor area
Storm Drain Facilities Fee	Prior to filing final map	\$500/gross acre or portion thereof
Bridge Crossing & Major Throughfares Capital Impact Fee	Residential	\$300/unit
	Commercial/Industrial	\$.25/sq.ft.
Traffic Signals	For all uses, Residential, Commercial, Industrial, Agricultural	\$50/required parking space

Source: City of Indio, Planning and Development Department

Table 6.4-2

HOUSING UNIT FEE ESTIMATES

Land Area	1207 SF	1350 SF	1500 SF	1750 SF	2000 SF
Garage	400 SF	400 SF	400 SF	520 SF	520 SF
Patio Cover	160 SF	160 SF	160 SF	288 SF	288 SF
Valuation	\$68,328.12	\$75,358.00	\$82,732.00	\$98,719.60	\$111,009.60
Building Permit	\$500.00	\$531.50	\$563.00	\$635.00	\$681.50
Plan Check	\$325.00	\$345.48	\$395.95	\$412.75	\$442.98
SMI	\$6.83	\$7.54	\$8.27	\$9.87	\$11.10
Plumbing	\$68.00	\$68.00	\$68.00	\$76.00	\$76.00
Mechanical	\$78.00	\$78.00	\$87.00	\$87.00	\$96.00
Electrical	\$112.28	\$118.00	\$124.00	\$138.80	\$148.80
Subtotal	\$1,090.11	\$1,148.52	\$1,216.22	\$1,359.42	\$1,456.38
TUMF	\$838.30				
Storm Drain	\$70.00				
Bridge	\$300.00				
Traffic Signal	\$100.00				
Parks	\$150.50				
Buildings	\$199.50				
Subtotal	\$1,658.30	\$1,658.30	\$1,658.30	\$1,658.30	\$1,658.30
Total Fees	\$2,748.41	\$2,806.82	\$2,874.52	\$3,017.72	\$3,114.68

Notes: Assuming a 6,000 square feet lot. This does not include school impact fees and other fees not collected by the Building Department.

Source: City of Indio, Planning and Development Department 1993

HOUSING

Construction Costs

Construction costs comprise the largest portion of cost for new housing development, usually between 40 to 50 percent of the total sales price. According to the Construction Industry Research Board, overall construction costs increased over 30 percent during the 1980s due in part to a significant rise in energy costs. Construction costs are relatively stable from community to community; however, certain factors including labor and materials costs may have regional variations. Construction costs in Indio do not constitute a particular constraint relative to other areas in the region. Indio has a good supply of low usage workers and construction materials.

Construction costs per square foot can vary due to the quality of the housing product. Construction costs for wood frame, single-family homes range from \$45 to \$60 per square foot. Costs for wood frame, multifamily construction average around \$42 per square foot, exclusive of parking. Underground parking is considerably more costly than at grade parking and is seldom used in Indio due to the availability of vacant land. Construction costs generally account for approximately 38 percent of total development costs.

Land Costs

Compared to other communities in the Coachella Valley, Indio's land prices are relatively inexpensive and vacant land is still available. A recent survey of local land developers found land prices in the City to range from \$30,000 to \$40,000 an acre. Land costs generally account for approximately 10 to 15 percent of total development costs. Land costs in Indio are not a constraint to development due to the relatively low land costs compared to other areas and an adequate supply of vacant land.

Financing

While interest rates have decreased radically since their high of 20 percent in the early 1980s, they still have a significant impact on housing costs and shifts in interest rates can have a profound effect on housing affordability.

The two types of loans used in residential development are the initial loan that the developer takes out for land purchase and construction costs and the loan that the homeowner takes out for the purchase of the home. The first loan is not affected by fluctuations in interest rates to the extent that the second is due to the relatively short duration of the loan. The loan by the homeowner is impacted heavily by fluctuations in the interest rate due to the long-term nature of the loan, currently 30 years. This can make the difference in qualification, which is based on monthly mortgage payments.

As of July 1993, the adjustable rate is 3.875 with a cap of 10.875 and a loan fee of 1 point. Current fixed rate for 30 years is 7-1/8 with a loan fee of 1 1/2 points. Developers normally have to pay the prime interest rate plus 2 percent for land purchase and construction loans. Financing accounts for approximately 7 percent of total development costs.

Local jurisdictions have no influence over interest rates, which are determined by national policies and economic trends. However, they can alleviate the burden of high interest rates on first-time homebuyers through programs to help reduce the costs of homeownership for these groups.

6.5 AVAILABLE FINANCING

The City has estimated it will have \$4.5 available from the Redevelopment Setaside Funds by June 1996. These monies can be used for the development and preservation of affordable housing. The City currently does not receive any other funding.

COMMUNITY ISSUES REPORT

1. Summary
2. Introduction
3. Community Development
4. Environmental Resources
5. Public Health and Safety
6. Housing

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EXECUTIVE SUMMARY

During the preparation of the General Plan, a series of interviews were held with groups of community leaders, staff, City Council, Planning Commission, and the general public in order to start formulating a plan for the Indio of tomorrow. In these interviews, people were asked what they found desirable in a city. The list derived was then compared to how well Indio met these criteria.

In addition to these interviews, several workshops were held with the public at large, with residents from the different areas within Indio, and during office hour sessions at City Hall. The information and ideas collected during these sessions were then summarized by each General Plan element and subelement (i.e., Land Use, Housing).

The information discussed in the CIR was extremely valuable in preparing a General Plan that was targeted at meeting the needs and desires of those living and working in the community and this document should be reviewed to get a better understanding of the resulting plan. As a brief summary though, Table 1-1 provides a review of the major issues raised during this phase of the General Plan's preparation.

Table 1-1
SUMMARY OF COMMUNITY ISSUES

ISSUE AREA	TOPIC AREA	DISCUSSION
LAND USE	Commercial	<ul style="list-style-type: none"> ▶ Disperse commercial throughout the City. ▶ More quality commercial desired in City. ▶ Provide recreational commercial facilities (movie theaters, mini-golf, etc.).
	Residential	<ul style="list-style-type: none"> ▶ Provide a variety of residential opportunities, including middle income, estates, gated communities, retirement and equestrian.
	Auto Mall	<ul style="list-style-type: none"> ▶ Evaluate moving auto mall to a new location.
	Downtown	<ul style="list-style-type: none"> ▶ Develop a theme for the downtown area. ▶ Relax land use controls in the downtown.
CIRCULATION	Trails	<ul style="list-style-type: none"> ▶ Provide a full range of trails for biking, pedestrian and equestrian usage.
	Traffic	<ul style="list-style-type: none"> ▶ Provide, well maintained, quality roadways. ▶ Provide ease of access to shopping areas.
INFRASTRUCTURE	Infrastructure	<ul style="list-style-type: none"> ▶ Better maintenance for existing facilities. ▶ Place utilities underground. ▶ Provision of services north of the freeway is critical. ▶ Provide a CIP for expansion and maintenance of services.
COMMUNITY SERVICES	Recreation	<ul style="list-style-type: none"> ▶ Provide more recreational programs. ▶ Provide more diverse types of recreation for all age groups, especially teens. ▶ Provide more, bigger and better equipped parks.
	Schools	<ul style="list-style-type: none"> ▶ City should cooperate with schools, co-location with parks. ▶ Encourage the COD campus in Indio.
COMMUNITY DESIGN	City Image	<ul style="list-style-type: none"> ▶ Too much bad press; City needs to work on better PR ▶ Increase graffiti removal program ▶ Demolish blighted buildings
	Standards	<ul style="list-style-type: none"> ▶ Stress architectural design ▶ Encourage creative tract layouts ▶ Establish a Design Review board - require quality development
	Themes	<ul style="list-style-type: none"> ▶ Indio needs a theme - What is Indio today?

Table 1-1

SUMMARY OF COMMUNITY ISSUES

ISSUE AREA	TOPIC AREA	DISCUSSION
ECONOMIC/ FISCAL	Tax Base	▶ Attract revenue generating business.
		▶ Become more competitive.
		▶ Train employment base.
		▶ Retain professionals in town, both work and residence.
CULTURAL RESOURCES	Historic	▶ Historic museum is underutilized as a resource.
		▶ Capitalize on historic aspects.
EMERGENCY SERVICES	Police/Fire	▶ More police and fire protection is desired.
HOUSING	Single Family	▶ Greater diversity in housing types (mid-range, estates, gated communities).
	Apartments	▶ Too many apartments. ▶ Apartments should have a higher level of amenities then those currently required.
	Low Income	▶ Many feel City has too much, but recognize the demand.

INTRODUCTION

2.1 ISSUES IDENTIFICATION AND THE GENERAL PLAN

Issues that were identified through the community input workshops formulated the basis for the goals and policies portion of the General Plan document. The information discussed in the CIR was extremely valuable in preparing a General Plan that is targeted at meeting the needs and desires of those living and working in the community.

State law establishes a basic list of issues that a General Plan must cover; however, every city of county has the option to address issues that are relevant to its constituents. Each community possesses unique characteristics which determine what issues are important to them.

Issues can emerge in the form of opportunities and constraints. The positives and negatives of a community are important to identify. This gives the community an opportunity to enhance its assets and address its short comings in the General Plan.

Issues can also be regional in nature. Local governments are becoming increasingly responsible for regional issues such as traffic, air quality, water quality, and land use. Regional issues are also addressed in the General Plan in the form of goals, policies, implementation measures, and plans.

2.2 PROCESS

During the preparation of the General Plan, numerous interviews and community meetings were held in the City to solicit input from residents, business and industry, agency and utility staff and directors, City staff, land owners and other interested individuals at each step in the development of the General Plan. Inputs from these groups were obtained in several ways. These included:

- ▶ group and individual interviews with community leaders, including the City Council and Planning Commission;
- ▶ interviews with City staff and agency staffs;
- ▶ workshops open to the general public; and,
- ▶ weekly "drop-in" office hours where the planning consultant would meet with anyone having concerns or questions regarding the upcoming General Plan. These were held at City Hall for a 2-month period.

Although public participation has taken place throughout the preparation of the General Plan, a large portion of this public involvement was targeted at soliciting inputs early in the General Plan process. This information was then used for the development of the CIR. During interviews and workshops in this phase, participants were asked two key questions designed to solicit their input as to the shape of Indio's future. These questions were as follows.

1. If moving into a new region, describe what factors you would consider in choosing a city to move into?
2. Using the list you just developed, how would you compare Indio to the criteria you outlined earlier?

From these questions, the groups being interviewed often developed a list of "pros" and "cons" for Indio as it related to their expectations. From the responses, the CIR was prepared.

The information discussed in the CIR was extremely valuable in preparing a General Plan that was targeted at meeting the needs and desires of those living and working in the community.

2.3 REPORT FORMAT

In the CIR, the responses were organized by General Plan subelement (such as Land Use). For each subelement, the following information was presented:

- ▶ what is desired in a city;
- ▶ what assets does Indio possess in this topic area; and,
- ▶ what issues face the community under this topic.

For the last item, issues were further divided by who provided the input: the public (including the City Councilpersons and Planning Commissioners), City staff, and technical issues raised by the General Plan consultant.

COMMUNITY DEVELOPMENT

3.1 LAND USE

3.1.1 Desire In A City

- **Convenient Shopping:** The majority of the groups interviewed felt that shopping should be close to residential development. For instance, grocery stores should be mixed throughout a city, making it easy for people to reach them.

The groups also felt that a community should have variety and quality in the commercial opportunities within the community.

- **Entertainment Facilities:** A majority of the respondents said they would look for a community that had a variety of entertainment facilities for all age groups. Items they would look for in a community include: movie theaters, bowling alleys, miniature golf, etc.
- **Restaurants:** If looking to move to a new city, most said they would also look at the variety of restaurants available in the community. The groups stated that a city should have the whole range of restaurants available, including fast-food, mid-priced, family style and high-end dining.
- **Civic/Convention Center:** A few individuals mentioned that they would look at a city's civic center/city hall facilities, and also would look for the availability of a convention center to attract businesses and tourists.
- **Diversity in Population:** Several persons mentioned that they would want to live in a city with a population that is diverse in income, ethnic mix and age groups.
- **Mixed Uses:** A few individuals discussed the desire to live in a community that contained

mixed use developments. These areas would include a mix of residential, commercial and community services within walking distance.

- **Other:** Several persons commented that a city should offer all types of lodging, from motels to destination resort hotels.

A comment was also made that a desirable city should have a conveniently located post office with ample parking.

3.1.2 Assets

Under the discussion of land use related assets, there was not clear consensus item, although several observations were offered.

- **County Government Facilities:** Several individuals commented on the many advantages of having the County offices located within the City. The County offices were seen as a major employer, and a draw, or reason, to come into Indio.



The main County office building, located on Highway 111 at Oasis Street, brings a high number of employees and visitors to Indio everyday.

- **Developing West End:** It was noted that the west side of town was enjoying continued development. Some of this development, such as the construction of middle income tract housing, was seen as a positive change. Comments on the need to develop a diversity of housing, including more middle and high end housing, was noted throughout the interviews. The development on the west side of town was seen as a step in this direction, and a positive sign for the City.
- **Mexican Restaurants:** During the discussion on restaurants, the comment was made that Indio had several very good Mexican restaurants, and that these attracted individuals from surrounding communities as well as from within Indio.
- **Stable Community:** It was noted during the discussions that Indio was a stable and "friendly" community. The City is made up of many families who have resided in Indio for many years, and some for generations. The community also had many well established churches, and that people always feel welcomed in Indio. The town, and its people are not pretentious.

3.1.3 Issues

- **Auto Mall:** The Auto Mall, and what should be done to improve its viability, was the source of many comments throughout the interviews. One of the most common comments dealt with the location of the Auto Mall, although the groups had no clear consensus as to when and where it should be relocated, or even if it should move at all. Suggested locations and/or improvements included:
 - ▶ In the short-term, leave the Auto Mall at its current location, and focus on providing better parking and improving the Mall's image.
 - ▶ For the long-term, two suggestions for new locations were made. One suggestion was to move the Auto Mall to the north side of I-10 for better freeway access and

visibility. The second suggestion was to move the Auto Mall to the west end of Highway 111 in order to gain access to markets in the western Coachella Valley.

As stated above, the location of the Auto Mall had no clear consensus. Several others suggested that the Auto Mall remain in its current location. This view was tied to problems associated with the move more than a feeling that the current location was the best for a auto mall. The problems with the move that were mentioned included the private and public expenditures made to the existing site, and the problem with reuse of the showrooms and other facilities if the auto dealers moved out.



Current Auto Mall location on the east end of Highway 111. Photo shows lack of off-street parking and unifying theme.

- **Convenient Shopping:** The consensus of the groups interviewed was that shopping should be close to residential development. At the current time, everyone stated that most commercial is along Highway 111, and that residents in many parts of the City had to drive a further distance than they should to do everyday shopping, such as for groceries.

Another aspect of convenience dealt with the lack of some commercial opportunities in town. For instance, many felt the town needed a wider selection of clothing and shoes, especially for the professional. The need for

other quality commercial entities, recreation, restaurants, clothing, services, etc., was identified as a need in general. The feeling was that residents should not have to go to another city to fill their needs. Quality commercial products and a large selection of products should be available in town.

- **Downtown:** The issue of what to do to help the downtown area revitalize itself was a very popular topic. Recommendations for downtown included:

- ▶ Develop a theme for the downtown area that will give the area a sense of place and character, and that would help to draw investors and shoppers into the downtown area. The two most popular suggestions were a Mexican village/shopping district or a railroad oriented area.
- ▶ In addition to the themes mentioned above, it was also suggested that the area be used as a transportation hub, with a tie-in to the railroad.
- ▶ Loosen some of the land use controls in the downtown area. These include parking, setbacks, outside displays, etc.
- ▶ The City should actively work to eliminate deteriorated buildings. The City should work with land owners to remove debris from damaged/destroyed buildings, and abandoned buildings that are not salvageable should be demolished.



The right side of the photograph shows an abandoned building in the downtown area.

- ▶ The consensus of the groups interviewed was that the City should not invest more of its money at this time (general funds or redevelopment) to fix the problems in the downtown. It was felt that the City should focus on theme and land use controls to bring change to the downtown--not money.

The following items were not a consensus of the various groups interviewed, but were additional comments and suggestions related to the downtown:

- ▶ Although not in the consensus, some recommended that the downtown develop second-hand and antique/craft type stores.
- ▶ A Farmers' Market was suggested.
- ▶ Several noted problems with Miles Park (crime, overuse, etc.). It was suggested that the City redevelop the area near Miles Park with senior housing.
- ▶ Develop the City Hall area with a college campus, vocational training center, or other educational facility.

- **Entertainment Facilities:** A strong consensus was to need to provide a range of commercial entertainment facilities within the City. Some of these items, such as a movie theater, were seen as items every town should have for its residents. Others added that a broad range of activities, both commercial and public, were

COMMUNITY DEVELOPMENT

needed to give children alternatives to gangs and drugs.

The entertainment facilities should provide something for all age groups. Some of the more popular items described as desirable include movie theaters, bowling alleys, miniature golf, and water slides.

- **Residential:** The City needs of a variety of residential land uses. Recommendations include develop active retirement communities, create estate size lots and encourage/locate equestrian uses south of Avenue 50.

- **Restaurants:** Those interviewed wanted a variety of restaurants in a City. There should be fast-food, mid-priced, family style and high-end dining.

- **Commercial:** The following suggestions relative to commercial development were received from members of the various groups. These non-consensus items are in addition to the consensus items presented under "Convenient Shopping" above.

- ▶ Several noted that the City needs to resolve the conflict with the Fashion Mall before the major department stores go to another city.
- ▶ Need to encourage the development of more tourist oriented commercial uses such as golf courses.
- ▶ The Shadow Hills area should be the future site of a regional mall.

- **East Valley Parkway (Indio Boulevard):** It was suggested that the existing truck services on East Valley Parkway be relocated to I-10 and tourist-oriented development be encouraged along this street. Old businesses, especially hotels, should be abated in this area.

- **Tourist-Oriented Land Uses:** Some respondents do not see Indio as a destination resort, however tourist-oriented land uses are desired by some who want a country club

atmosphere. More golf courses and golf related resorts were identified as a need.

Several felt that the Fairgrounds are underused, and that Indio needs to better utilize the advantage offered by the Polo grounds.



The Fairgrounds offer some year-round activities, but many felt the usage could be higher with the proper promotion.

3.1.4 Staff Issues

- **Commercial:** The City staff reflected the public's statement that a larger and more diverse commercial base is needed in Indio, including more family and high-end restaurants. The staff also agreed on the following issue areas:
 - ▶ The problems associated with the Fashion Mall need to be solved so that the project can proceed.
 - ▶ Need to develop a stronger commercial base along East Valley Parkway (Indio Blvd).
- **Residential:** Shadow Hills and Indio Ranchos have the most immediate planning needs. Develop an equestrian system in Indio Ranchos. It is the goal of the City to balance commercial and residential uses. Limit residential if commercial development is not keeping up. Use the Shadow Hills area to

balance the City on the high-end. Set density minimums, but allow for bonuses with certain amenities.

- **Auto Mall:** There is not a consensus on the location of the auto mall. It was suggested that the auto mall should move in the next 5-10 years to I-10. It was also suggested that the Auto Mall should move now but not sure where.
- **Diversity:** Indio is the most balanced City in the valley. However, more diversity in racial makeup and income is needed.
- **Downtown:** There should be no more financial involvement from the City. Land use controls need to be loosened to allow special uses such as Farmers' Markets, antique and craft stores. Find a theme "Visit Mexico and Still Be Able To Drink the Water".
- **Other:** The City needs to develop a plan for in-fill projects. Focus on Manufacturing. Designate land adjacent to the hospital for medical uses.
- **Overlay Districts:** Create overlay districts to allow unique land uses. Create a Civic Center and Justice Center District.
- **Recycling:** Allow for recycling and solid waste facilities.

3.1.5 Technical Issues

- **Auto Mall:** The location of the auto mall needs careful study to determine if the center should stay in its current location, or be moved to another portion of the Planning Area. Areas to consider for relocation include the west end of Highway 111 and along the Interstate 10 corridor. Considerations to be addressed if the auto mall stays in its current location include parking, accessibility, signage, and room for expansion.
- **Center of the Eastern Coachella Valley:** Take advantage of Indio's strategic location in the center of the Eastern Coachella Valley.

- **City Image and Economic Development:** Greater emphasis and City resources need to be directed toward the twin goals of improving the City's image and to fostering economic development.
- **Commercial Dispersion:** Commercial centers need to be dispersed throughout the community to better serve the residential neighborhoods.
- **Commercial Recreation:** Encouragement of commercial recreational facilities such as movie theaters, miniature golf courses, bowling alleys, water parks, golf courses, and other similar uses. Need to take advantage of the freeway exposure offered in the Planning Area.
- **Consistency with Existing Land Uses:** Careful review of land use consistency between established neighborhood and new development proposals needs continuing monitoring.
- **County Center Service Commercial:** The City needs to increase commercial/service land uses near the County Center to take advantage of the employees, visitors and County purchases.
- **Downtown:** Downtown Indio needs special consideration to return economic vitality and recognize the special circumstances of this area. Business development, special design standards, area themes, broader allowed uses, and training facilities tied to the Enterprise Zone will be reviewed in the new General Plan.



Many parts of the downtown area, such as the Indio Centre Plaza, offer needed shopping to the surrounding residential areas.

- **Fairgrounds:** The Fairgrounds (also known as the Desert ExpoCentre) offer a range of indoor and outdoor facilities that should have more use than they currently receive. The City should work with the Fairgrounds promoters to bring additional events to this location.
- **Fast Track Development:** The City's new General Plan should assist in speeding up the approval process. Reduction in the use of Conditional Use Permits (CUP), specifying design guidelines, and providing up-to-date land use guidelines will help speed up the development process and eliminate the risk of development in Indio. At the same time, the process should be sensitive to the need for public involvement in the decision making process.
- **Higher Education:** The City and new General Plan should actively pursue the development of a higher education facilities in the community. Redevelopment assistance should be provided to assemble a site if necessary.
- **Hispanic Population:** The majority of Indio's population is hispanic. The City's new General Plan needs to look at the needs of this under-represented segment of Indio's population.
- **Master/Specific Plans:** Master plans and specific plans need to be utilized as planning tools throughout the City. These tools will be

especially useful in areas with large, undeveloped land holdings.

- **Physical Constraints:** A number of physical constraints will need to be overcome for development to occur in some portions of the Planning Area. These constraints include:

- ▶ the East Side Dike that runs in an east-west direction across the Shadow Hill area,



The East Side Dike is approximately 25 to 35 feet tall in areas, and runs across most of the Shadow Hills area.

- ▶ the All-American canal runs in a north-south orientation from the south end of the City to the middle of the Shadow Hills area, then runs east-west along the Dike,
- ▶ several regional transmission lines for electricity and natural gas,
- ▶ seismic features including active faults and areas prone to liquefaction,
- ▶ limited infrastructure in some portions of the Planning Area,
- ▶ flood hazards,
- ▶ the railroad tracks(s), Interstate 10, and
- ▶ the Whitewater River Channel bisects the Planning Area.

- **Polo Grounds:** The two polo clubs in town, the El Dorado and Empire Polo Clubs, offer an attractive destination that brings in tourists on an annual basis. This draw should be capitalized on with a destination resort and ancillary commercial uses.

- **Residential Variety:** A variety of residential neighborhoods and product types should be encouraged, including:
 - ▶ single-family detached homes in a range of sizes and costs;
 - ▶ gated communities;
 - ▶ residential estates;
 - ▶ golf course-oriented patio homes and condominiums;
 - ▶ retirement neighborhoods; and,
 - ▶ equestrian-oriented residential estates.

3.2 CIRCULATION

3.2.1 Desire In A City

- **Good Traffic Circulation:** Quality roads that are well maintained. Ease of access to major shopping areas.
- **Trails:** Trails and paths for biking, equestrian and pedestrian uses.
- **Public Transportation:** Reliable accessible public transportation.

3.2.2 Assets

- **Access:** Indio is easily accessed from I-10, Highway 111 and the railroad. Sun Busline serves the City. Access to Town Center is convenient.

3.2.3 Issues

- **Access:** Indio's location within the Coachella Valley was identified as an opportunity on which to build. Access to the I-10, Highway 111 and the railroad makes Indio an ideal location in the Coachella Valley for a transportation hub. It was suggested that a transportation hub could be used for tourism, a regional location and developed with a park and restaurants. Suggested locations for the hub include within the Justice Center or along Auto Center Drive.
- **Roadways:** The condition of the City streets and traffic congestion were consensus issues. The following comments were received:
 - ▶ There is a lack of road maintenance and the maintenance that does occur is uneven throughout the City.
 - ▶ The railroad tracks restrict access due to some remaining grade crossings and the number of trains that use the tracks daily.

- ▶ Truck routes need to be established so that trucks do not travel roadways not designed for this type of traffic.
- ▶ There is a need to develop other east/west streets to reduce traffic load on Highway 111. Suggestions included Dr. Carreon Boulevard, Avenues 48 and 50.
- ▶ Congestion and/or poor circulation were noted at the intersections of Highway 111 at Monroe Street, Highway 111 at the entrances to Indio Fashion Mall, and Highway 111 at Oasis Avenue.



The intersection of Monroe Street at Highway 111 was the most often faulted intersection by the public.

- ▶ Create a Capital Improvement Program for roads.
- ▶ Comments suggested that existing traffic impact fees are too high.
- **Trails:** The desire for pedestrian, equestrian and bike trails with regional linkage was identified by a large majority of the respondents. The City is lacking a comprehensive trail system and the trails that currently exist are not linked into a network. It was suggested that the area adjacent to the All American Canal and the Coachella Valley Storm Channel be used for trails. It was also noted that in order to become less automobile dependent, shopping areas should be centralized and linked with pedestrian trails.

- **Public Transportation:** The City and property owners need to work with Sun Busline to develop bus stops and shelters. The bus company is lacking funds for these items and it will be up to the individual developers to pay their share. It is the goal of Sun Busline to make Indio a transit friendly City and to have bus stops which have sidewalks, landscaped, handicapped accessible, and covered by a shelter or recessed into a buildings. It was also suggested that the City use Sun Busline for school busing.
- **New Freeway Overcrossing:** Comment was made that a bridge over the I-10 Freeway was needed at Madison Avenue.
- **Highway 111 Width:** Discussion was targeted at the future width of Highway 111, although there were equal arguments for widening to 6-lanes or staying at 4-lanes. There was a common concern that adequate circulation was needed, but the need for widening the highway was not a consensus.

3.2.4 Staff Issues

- **Roadways:** Several roadway issues were brought forth:
 - ▶ The City may need to connect Madison between Avenues 48 and 50.
 - ▶ For the mall expansion, street improvements will be needed on Las Palmas, Monroe, Date, Arabia, Rubidoux, and Plaza.
 - ▶ To comply with CVAG's regional needs, the Jefferson Street alignment and overcrossing will need to be installed.
 - **Trails:** Bike lanes and an equestrian trail system are needed. The trail system could be developed as multi-use.
 - **Access:** Create a bus hub within the Justice Center. Utilize the railroads.
 - **Street Standards:** Develop narrower local street and cul-de-sac standards. Private street standards need to be consistent.
- ### 3.2.5 Technical Issues
- **Access:** Access to arterials should be limited by using reciprocal access agreements between projects.
 - **Alternative Regional Transportation Routes:** As local and regional traffic in the Planning Area increases, alternatives to the I-10 Freeway and Highway 111 will need to be identified to assist in moving east-west traffic.
 - **Freeway Access:** The five existing freeway interchanges/freeway crossings in Indio's Planning Area are currently built to serve a rural community. Only the interchange/crossing at Auto Center Drive is more than two lanes in width. These rural designs will become overburdened as urban land uses continue to develop around them, and will need to be upgraded. In planning for these improvements, the following will need to be addressed:
 - ▶ funding mechanisms for these facilities, especially in light of the high expense of these facilities;
 - ▶ new freeway facilities have long lead times, so planning for the future needs to take place today;
 - ▶ rights-of-way for these widenings will need to be preserved as that areas along the freeway develop; and,
 - ▶ new freeway interchanges or overcrossings may be needed to handle future traffic. One such location is Madison Street.
 - **Future Circulation Plans:** The General Plan shall contain schematics for roadway cross-sections and intersection design that are capable of handling the traffic flow generated by present and future development. Areas of current inadequacies, such as the intersection

of Highway 111 and Monroe Street, will be addressed. Solutions for existing constraints may include widenings, changes in signalization or other controls, re-striping, use of medians, addition of turn lanes, or dispersement of traffic to other roadways/intersections.

- **I-10/Jefferson/Varner Alignment:** The I-10/Jefferson Street/Varner Road alignment will need to be changed in order to handle the levels of traffic seen for this area. Jefferson Street needs to be aligned directly into the bridge over the I-10 by moving its alignment to the west side of the existing trailer park. Varner Road needs to be moved to run along the southern edge of the trailer park to allow proper intersection spacing between the freeway ramps and Varner Road.
- **Incomplete Cross-Sections:** Several areas in the Planning Area have incomplete roadway cross-sections due to a mix of undeveloped and developed land. This is typical of any growing area, although it does present challenges to timely development of infrastructure, such as flood control.



This photo shows an incomplete roadway cross-section similar to what can be found in some areas in Indio.

- **Madison Street Extensions:** In order to relieve traffic congestion on Monroe and Jefferson Streets, the completion of Madison Street from Avenue 50 to the freeway should be considered.

- **Regional Traffic Planning:** The long-range circulation improvements proposed by the new General Plan need to be coordinated with state and CVAG circulation improvement programs. These improvements also need to be given proper priority with regional funding mechanisms.

- **Trails:** A full range of biking, pedestrian, and equestrian trails will be needed to serve the citizens of Indio.

In order to provide a City-wide trail system, a trunk trail along the All American Canal should be investigated with CVWD.



The All American Canal right-of-way provides an ideal location for a trunk trail with City-wide access.

3.3 INFRASTRUCTURE/ PUBLIC SERVICES

3.3.1 Desire In A City

- **Adequate Infrastructure:** A city should have high quality infrastructure that is well maintained without high cost. Low cost and availability of utilities including water is also desired. Capital Improvement Programs should be in place.

3.3.2 Assets

- **Available Utilities:** Utilities are available in most areas and water is inexpensive.

3.3.3 Issues

- **Infrastructure:** Lack of maintenance to the City's infrastructure was identified as a consensus issue. The majority of the respondents would like to see utilities placed underground. There is a need for a Capital Improvements Program to finance water, sewer and storm drain improvements. Services north of the freeway are critical.

3.3.4 Staff Issues

- **Master Plan:** The City needs to set precise goals for infrastructure needs. Currently there are no master plans for sewer, water or storm drains. Plans need to be prepared to determine how services will be provided to undeveloped areas. Can Indio provide the level of service it has in the pass? If a developer wants to go ahead and put in the required infrastructure for their project, should the City let the plan go forward without a master plan? Imperial Irrigation District transmission corridors need to be established.
- **Flood Control Facilities:** There are only one or two storm drain facilities in the entire City. Facilities are needed city-wide, especially in the Shadow Hills area. Coachella Valley

Water District (CVWD) is considering an amendment to their design standards from a 100-year flood to a 500-year flood. This could be costly on developments. Mandatory coordination is required.

3.3.5 Technical Issues

General

- **Capitol Improvement Plans (CIP):** CIP budgets need to be closely integrated with the City's current planning process.
- **Infrastructure Coordination:** The City should play a lead role in coordinating all infrastructure improvements throughout its planning area.
- **Infrastructure Master Planning:** The City should play the lead coordinating role in the development and implementation of infrastructure master plans for the Planning Area. The following master plans are critical to Indio's future:
 - ▶ Drainage/flood control master planning needs to be completed to the entire Planning Area.
 - ▶ Sewer and water master plans are needed to address the large expansion of population seen for the future, especially in the Shadow Hills area.
- **Underground Utilities:** All utility transmission lines/pipes should be placed below ground in the future, and areas that currently have aboveground facilities, should be placed underground when feasible.

Water Service

- **Reclaimed Water:** The City should plan for the future use of reclaimed water for landscaping public and private common areas such as parkways medians, golf courses, and parks.

- **Service Area Boundaries:** The service area boundary between the portions of the Planning Area served by the City and those served by the Coachella Valley Water District (CVWD) have not been clearly established. The City has expressed the desire to resolve this issue.
- **Water Facilities:** Plans to extend water lines to the northern portion of the Planning Area (Shadow Hills) are currently being developed. Another reservoir and pumping station will need to be installed to service future development.

CVWD needs to revise their pressure zone boundaries and create plans that identify and locate their wells and reservoirs. To service new subdivisions and commercial projects in CVWD's service area, more wells and storage facilities are needed as well as major water line extensions.

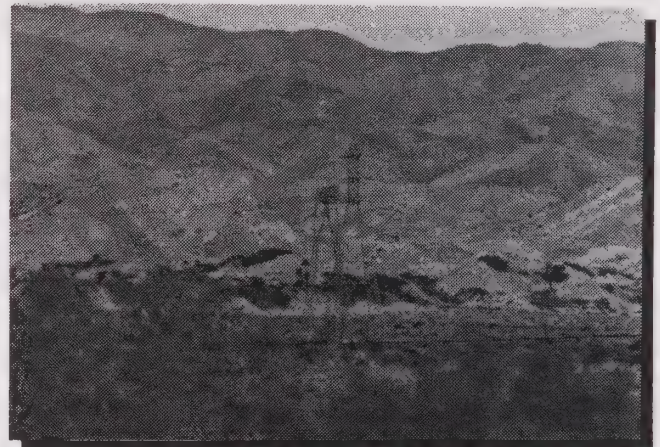
Sewer Service

- **CVWD Plant Expansion:** CVWD currently has plans to expand their reclamation plant at Madison Street and Avenue 38 (Warp 7) to its ultimate capacity of 20 million gallons per day. A lift station will need to be constructed to pump wastewater from Fred Waring Drive (Avenue 48), north to the reclamation plant.
- **Service Area Boundaries:** Valley Sanitary District (VSD) and CVWD are the sewer service purveyors for the Planning Area. The City needs to coordinate with these purveyors to ensure that the public achieves the best service possible.
- **Sewer Service:** Plans for sewer service to reach all parts of the Planning Area should be established, and those currently using septic systems should be encouraged to connect to sewer when available.
- **Trunk Capacity Under Whitewater River:** Currently, only one sewer line crosses the Whitewater River channel. A second line will be needed to service the Shadow Hills area and should be installed to function as a back-up system in case one of the pipes gets

washed out in a storm or some other emergency.

Electricity

- **Regional Transmission Corridor:** Southern California Edison has a large transmission corridor in the Shadow Hills area north of the East Side Dike. The width of the corridor varies, however there is enough area to place an additional 500 Kv transmission line in future. Plans for a future transmission line in that area are currently under consideration.



The photograph shows two of the high tension electrical transmission lines located in the Shadow Hills area.

Natural Gas

- **Regional Transmission Corridor:** Several regional gas transmission lines run through the north end of the Shadow Hills area, north of the East Side Dike. The location and building restrictions associated with these pipelines will need to be discussed in the General Plan. Another runs parallel to the SPRR tracks.
- **Service Extensions:** Gas line extensions will be needed to the Shadow Hills area. Currently, the high pressure line in Monroe Street is the only gas line crossing of the Whitewater River channel.

Telephone

- **Service Extensions:** GTE will need to extend more capacity to the Planning Area, especially to the Shadow Hills area. Future telephone lines will be required to be installed underground.

Drainage/Flood Hazards

- **Historic Flood Areas:** Areas which have been historically subject to natural flooding within the Planning Area include: Avenue 45 at Van Buren Street, Highway 111 at Calhoun Street, and Fred Waring Drive and Miles Avenue at the Whitewater River. The flooding in these areas is primarily due to the combination of poor drainage, topography, soils with low infiltration rates, insufficient local drainage facilities, and lack of bridges.



Fred Waring Drive crosses the Whitewater River at grade (i.e., no bridge), and is subject to washout during a major storm event.

- **Master Plan Needed:** The storm drainage system in the City of Indio was constructed over a period of time without the benefit of a master plan for area development. As a result, portions of the storm drain system within the Planning Area have insufficient capacity to carry the 100-year flood event due to obstructions, under-sizing, and general layout. A detailed storm drain system inventory is needed to analyze problem areas and to identify future improvements including

maintenance need. A master plan of drainage should then be developed in order to adequately service development in the Planning Area.

In addition to these specific areas, there is also a flood hazard risk in the areas north of the East Side Dike, especially along the eastern end of the dike.

- **Service Area Boundaries:** The flood control service area boundaries between the City and CVWD need to be clearly defined before a flood control master plan is developed.
- **Thousand Palms Wash Expansion:** As a part of CVWD's ongoing flood control improvements, the Thousand Palms Wash is planned for extension to the northwest. Extensions of this channel may impact future development.
- **Whitewater River Capacity:** The capacity of the Whitewater River is currently under study by CVWD and the U.S. Army Corps of Engineers. There is a concern that in a 100-year flood event, the Whitewater River may not have sufficient capacity to cover existing runoff.
- **Whitewater River Channel Improvements:** The Whitewater River channel is currently undergoing construction improvements. The side slopes of the channel have been concrete lined from the City's northwestern boundary to Madison Avenue. There are future plans to continue these improvements throughout the entire length of the stormwater channel.

3.4 COMMUNITY SERVICES

3.4.1 Desire In A City

- **Cultural Activities:** Cultural activities such as Cinco De Mayo celebrations.
- **Parks:** Large parks in good locations with well maintained equipment and sports fields.
- **Recreational Facilities:** A variety of recreational facilities and activities for all ages.
- **Schools:** Good schools that are not overcrowded. Higher education facilities, such as community colleges and four year universities..
- **Other:** Diversity in churches, more child care facilities, a major sports complex, a good library, youth programs and good health care and medical facilities were also noted as desirable in a city.

3.4.2 Assets

- **New Schools/ Better Education:** The school district has built more schools and the quality of education in Indio has increased. Overall, those interviewed thought that the Desert Sands Unified School District was doing a good job.



Indio Middle School is an example of the modern, new facilities being built in Indio.

- **Library:** The City has a good public library and a law library.
- **Other:** The Date and Arts Festivals, the public golf course and JFK Hospital were identified as assets.
- **Recreation:** Although the City lacks parks the indoor recreation is good and overall recreation in Indio is fair.

3.4.3 Issues

- **Higher Education:** A two and four year college campuses need to be developed in Indio.
- **Parks:** The need for bigger and better equipped parks was a consensus. Specifically, the following issues related to parks were identified:
 - ▶ The amount of park land available is not enough to serve the population of the City.
 - ▶ The parks that are available in the City are too small and in poor locations. Many stated that the parks are placed on leftover well or water tank land. These sites are often too small, and are not in the right locations.
 - ▶ Many stated park maintenance is poor.
 - ▶ The concept of developing larger and better parks by co-locating them with public schools was mentioned as a good idea.
 - ▶ The City needs to spend more money on parks and have more controls.
 - ▶ A large, central community park as well as more neighborhood parks are desired.
 - ▶ There needs to be more playground equipment and developed baseball and soccer fields within City parks.

- ▶ Some suggested that blighted buildings in the downtown area could be removed, and the land could be developed with a park.

- **Recreational Facilities:** The lack of recreational facilities is an issue. There is a need for more diverse types of recreational facilities, both indoor and outdoor, that serve all age groups. Commercial recreation such as bowling, tennis, miniature golf and water park type uses are desired. The lack of activities for teens was also noted.



Although there stills exists a shortage, the new Indio Community Center and Gym is an example of progress in Recreation programs.

- **Schools:** The City and the District(s) need to work together on planning facilities, and the City should try to keep the DSUSD offices in town. Issues identified were poor maintenance and older facilities. The problems with overcrowding is a problem faced throughout the valley
- **Other:** There is a lack of adequate child care facilities in town. There are three major hospitals within driving distance of Indio. JFK Hospital needs more press. Indio needs more, golf facilities, some of which should be affordable.

3.4.4 Staff Issues

- **Higher Education:** The City need to attract a two and a four year college. Suggested

locations include a short-term nursing campus near Dr. Carreon's residence and long-term in Indio Ranchos.

- **Parks:** The need for park improvements was identified by the majority as an issue. Specific comments received:

- ▶ The City should evaluate the provision of park land and recreational services in the community. This includes a determination of who should obtain and manage park land and recreational programs and how they are funded. Currently, the City obtains park land, furnishes gates with equipment, and maintain parks. The Coachella Valley Recreation and Parks District (CVRPD) currently runs the recreation programs in the City.
- ▶ There are not enough parks, specifically on the westside.
- ▶ Parks are too small with poor equipment.
- ▶ Use of retention basins, well, and reservoir sites for parks was questioned.
- ▶ There are no trails that link to parks.
- ▶ The City needs to assess the recreation needs of the community.
- ▶ Coordinate with schools on recreation co-use.

- **Medical Service:** JFK Hospital needs to expand. Health care facilities should be developed near the hospital to keep medical uses from becoming fragmented throughout the City. Urgent care facilities will be needed in the Shadow Hills area.

- **Recycling Service:** The City needs to develop a comprehensive recycling program for the community.

- **Schools:** The school district offices may need to be relocated. The District employs approximately 600 persons and keeping the offices in town will be beneficial to the City. Possible new location at Burr and Miles Street.

The new site would need to be centralized within the district for efficient food service.

- **Social Services:** Half-way houses and rehabilitation centers are needed in the City to serve the community not the entire Coachella Valley. For example, Indio has 16% of the Coachella Valley population and 40% of the areas Section 8 Housing. People may come to the Coachella Valley to escape urban problems in big cities.

3.4.5 Technical Issues

- **Co-Location of Facilities:** The City should investigate the co-location of parks and/or other civic uses with existing or new school facilities. Co-use of facilities could help achieve better facilities for both the City and the schools.
- **Health Care:** The City needs to encourage the development of health care in the Planning Area. This includes the development of supporting uses around the John F. Kennedy Memorial Hospital, such as medical office space, convalescent care facilities, and a College of the Desert (COD) branch offering nursing and other medical training coursework.



City land use policies should emphasize the development of supporting uses adjacent to the JFK Hospital.

The City should also work to establish other sites in the Planning Area to provide satellite

medical centers that provide daily health care services, urgent care facilities, and doctors offices so that residents are not required to travel across town for routine health care.

- **Higher Education:** A location for higher education facilities in Indio should be actively pursued. A potential campus site for both a community college (College of the Desert) and a four year state college should be planned.
- **Levels of Service:** The City needs to strive toward the provision of adequate community services as the community grows and develops.
- **Library Standards:** The General Plan should establish standards for facilities and number of volumes to serve the population. The plan should also show potential locations for future branch facilities.
- **Parks District:** The City, with the CVRPD, should explore all methods available to best serve Indio residents. A look at available funding and whether this would result in real changes needs to be reviewed. Other options involving the sharing of responsibilities and other funding mechanisms needs further investigation.
- **Park Standards:** The City's General Plan should establish a park land standard (acres per 1,000 population) for the Planning Area. The park standards should also define the types, mix, and quantities of equipment needed in the Planning Area, and the sizes and types of parks needed (neighborhood, community, regional).
- **Recreation Programs:** Greater diversity of recreational facilities and programs are needed.
- **School Sites:** Given the large, undeveloped tracts in the Planning Area, the City and its new General Plan should make provisions for siting school facilities in centralized locations that best serve the student population, and re-establish the schools as the central focus of a neighborhood(s).

3.5 COMMUNITY DESIGN

3.5.1 Desire In A City

- **Aesthetics**: An attractive city entrance with signage that identifies the community. There should be landscaped parkways and public art. Subdivisions and/or commercial projects should have creative layouts and designs.
- **Cleanliness**: A city should be clean with a lack of visual signs, graffiti and bars on windows. There should be pride in ownership.
- **Public Art**: The city should have public art throughout the community to give the city "life".
- **Sense of Identity**: A community identity and a sense of belonging. Open communities that are not gated.

3.5.2 Assets

- **Cleanliness**: Respondents stated that Indio is a clean City overall.

3.5.3 Issues

- **Higher Development Standard**: To stress architectural design and encourage creative tract layouts, the City needs a design review board and design guidelines manual with realistic design standards. The City should require quality development. RV parking at homes should be restricted. A higher class of development along Highway 111 should be encouraged.
- **Improve City Image**: Indio has too much bad press which has created an image problem. Properties are lacking upkeep and there is a lack of pride in ownership. The City needs to increase graffiti removal program, re-use vacant buildings and demolish burned buildings left standing. The downtown area is the City's image and it should be cleaned up.

- **Themes**: Need a theme(s) to define Indio. A theme(s) could be used to create a sense of place, to give residents and visitors a sense of identity with Indio that sets it apart from the rest of the Coachella Valley; a uniqueness. Theme was often mentioned in relation to the Downtown area. Suggestions for a theme for the Downtown included: historic railroad, hispanic shopping district, emphasizing the historic nature of the area, or a western theme.
- **Other**: Smaller lots are okay, 8,000 square foot lots are best but should not be a minimum. Landscaped areas are not maintained and the City needs more greenbelts. The City should take advantage of entrance to PGA West. Utilities should be placed underground and curbs and gutters need to be installed on all roads. More neighborhood planning is needed. The City should focus on re-mediation. There was some concern that Indio has too many block walls around subdivisions on the west side and a "walled" City is being created, i.e., allow homes to face streets.
- **Public Art**: The City should have a program established to encourage the use of art in public spaces and associated with new developments. A public arts commission should be established in the community to provide guidance and to pursue grants.

3.5.4 Staff Issues

- **Design**: The City's need for design review and/or increased standards is an issue. Responses were mixed as follows:
 - ▶ Design review is not needed at this time. This process could turn business away. City's expectations should not exceed ability.
 - ▶ Design regulations should be more stringent on residential development especially apartments and new mobile homes. City currently has no authority to deny poor designs of multi-family developments.

- ▶ Minimum lot size should not be the only criteria for approval of new subdivisions.
- ▶ Some of the newer developments are nice, however, it is unfortunate that the lots are getting smaller.
- ▶ Provide for the design of up-scale housing in Indio Ranchos and Shadow Hills.
- ▶ The City does not have standards for cluster developments or preserving view corridors.
- ▶ There are no covered parking requirements.
- ▶ Garage conversions occur without building permits.
- ▶ There are not enough parking spaces (resident and visitor) required in apartment developments.
- ▶ There is no method to require design enhancements or architectural creativity.
- ▶ Build in environmental controls (i.e., lighting and fencing) into the design of projects.

- **Themes:** Mexican or Spanish theme in downtown. Do not deny what Indio is and do not try to be what it is not. The vision for the City can not be so broad, to miss an issue relevant to a given area.

Other possible themes within the City relate to agriculture, Patton's 3rd Army, on the Colorado Aqueduct.

- **Landscaping:** There needs to be a City landscaping program. Have some type of consistent streetscape, but allow for some variety. Landscaping should be required on all unfinished pads. Landscape areas adjacent to I-10.

3.5.5 Technical Issues

- **Design Guidelines:** The new General Plan should include a section on design guidelines for the Planning Area. These guidelines should provide general guidelines on the types of development that are desired in the community. These guidelines will be similar to those presented in the Shadow Hills Interim Policy Plan (SHIPP).

The purpose of these guidelines will be to provide general direction for development within the Planning Area; to provide a set of expectations upon which developments will be judged.

Two levels of design guidelines will be provided. The first will be general guidelines for the Planning Area as a whole. The second level will provide guidelines for specific Planning Sub-Areas that have special circumstances, such as the Downtown Sub-Area.



Recent tract developments, such as the Santa Fe tract, symbolize the level of design that the public desires in Indio.

- **Design Review Board:** The City should establish a Design Review Board as an important part of its development review process.
- **Detailed Design Guidelines:** After adoption of the new General Plan, the City should

follow-up with the preparation of detailed Design Guidelines.

- **Improve Image of Existing Development:** In order to improve the image of Indio, the following should be accomplished in the short-term:
 - ▶ graffiti removal programs should be expanded;
 - ▶ blighted building(s) should be removed as soon as possible.
- **Master Planning:** Master plans and specific plans should be required for larger development areas in order to set comprehensive standards for an area, and to create a common theme in an area.

3.6 ECONOMIC DEVELOPMENT

3.6.1 Desire In A City

- **Economic Mix**: A desirable community should have a diverse range of income groups, with no single income group dominating the community.
- **Job Opportunities**: A community should have job opportunities available now, and have a outlook for continued employment growth.
- **Fiscal Stability**: Low taxes are desired. Assessments and Capital Improvement Programs should be developed.

3.6.2 Assets

- **Land**: City has vacant, undeveloped land served by freeway and rail transportation networks.
- **Work Force**: Indio has an affordable labor force and an Enterprise Zone.

3.6.3 Issues

- **Attract Businesses**: The City is not competitive. The labor force needs to be trained. The City needs to attract clean industries and develop a plan to encourage people to live and work in Indio. What support institutions and jobs will be lost if agriculture industry goes away?
- **Improve Tax Base**: Indio has a large percentage of low income residents without disposable income. The City should plan growth with revenue producing businesses that generate sales tax.
- **Downtown**: In downtown, rent and land values are inexpensive. The City should allow downtown fix itself. There should be no more cash flow from the City into downtown. Improvements in downtown look nice but did not bring in business.

- **Other**: To make the City financially sound, the City should decrease the government payroll, consider sharing growth with La Quinta (Gateway), balance jobs/housing, expand the redevelopment area and develop the I-10 corridor with more affluent retail establishments. The high cost and management of the ambulance service was identified as an issue. Capital Improvement Programs for roads and infrastructure are needed.

3.6.4 Staff Issues

- **Capital Improvements**: There is concern about the cost of financing new and expanded overcrossings. Assessments are need to fund road, sewer, water and storm drain improvements. The City currently has 21 Lighting and Landscape Districts. These need to be consolidated into a few common districts.
- **Tax Base**: Historically, Indio was a middle-class community with a few powerful, high income citizens. Today, many of the residents have very little disposable income after purchasing the necessities. Community services in the past may have been high because Indio had a large portion of the Coachella Valley sales tax. The City needs to increase its tax base and generate revenues for quality of life items. Suggested methods:
 - ▶ The City should acquire Bureau of Land Management (BLM) land to rent or lease out for recreation and RV camping.
 - ▶ Develop recycling and composting programs.
 - ▶ Currently 85% of sales tax is generated from retail. Need to diversify.
 - ▶ Create a Community Facilities District to buy land. This could be very profitable for the City.
 - ▶ Establish impact fees on new developments for police, fire protection and parks.

- **Downtown:** There should be no more financial involvement from the City in the downtown area. Need to look at the greater good of the entire City. There maybe opportunities to develop other areas of the City to maintain the sales tax.
- **Economy:** The City must come up with a plan to get through the next 3-5 years until economy comes back. Participation by citizens at all levels of the government is essential. Look at all options and do not dismiss prematurely. During this time, the City can not be looked at as a whole. Certain areas may require more or less attention. Earnings in the area may not be large enough to support \$200,000 or greater home prices.
- **Residential:** Residential development is a money loser. Single family is not as costly as multi-family developments. To help upgrade residential properties, the City should match the owners cost for improvements with Redevelopment funds.



The Indio Fashion Mall is centrally located on the Highway 111 corridor, and is critical to the corridor's success.

3.6.5 Technical Issues

- **Fast Track Approvals:** City needs to remove excessive red tape. Examples include reducing the number of entitlements that require a Conditional Use Permits (CUP), and allowing minor approvals, such as sign permits, to be handled at the staff level.
- **Indio Fashion Mall:** The success of the Indio Fashion Mall is critical to the economic viability of the Highway 111 corridor in Indio. Major efforts by the City should be undertaken to assure the success of this center.

- **Job Training:** City needs to develop job training programs to train the current service-oriented labor force for higher skilled, higher paying employment opportunities that could be offered in the City, especially in the Enterprise Zone.
- **New Business Growth:** The City needs to attract new businesses for revenue generation and job growth.
- **New Housing and Commercial Opportunities:** Indio needs to develop a range of commercial and housing opportunities that will capture the range of market segments available in the Coachella Valley, especially the East Coachella Valley.

In the housing mix, opportunities for first-time move-up buyers is seen as a major need in the community.

- **Project Fiscal Impact Analysis:** The City should develop a standardized procedure for evaluating a project's fiscal impact. Each project should be required to prepare this evaluation so that the City leaders are aware of the implications of their decisions on the City's finances.
- **Promote Indio:** Indio needs to be more competitive with surrounding communities in promoting itself as the location for new businesses. The City needs promotional

literature and active representatives that are paid to pursue leads.

- **Sales Tax Distribution:** Work through CVAG to get sales tax rich communities in the Coachella Valley to share sales tax dollars that are brought from households in Indio.

3.7 GOVERNMENT

3.7.1 Desire In A City

- ☐ **Civic Involvement:** A community that encourages all the residents, including children, to become involved with government activities and programs.
- ☐ **Good Community Leadership:** Well run city services with good community leaders that are easy to contact. A city that works together with the county, school districts, and other special districts serving the citizens of Indio.

3.7.2 Assets

No assets were described by the public on this item.



Indio has a centrally located civic center that contains the City Hall, City Library, and Senior Center.

3.7.3 Issues

- ☐ **Code Enforcement:** More money needs to be spent towards code enforcement. Code enforcement education is needed.
- ☐ **City's Attitude:** The City needs to be more service oriented. Currently there is too much red tape. The City needs to improve its attitude towards small businesses. The City should give the people what they want, not

what the City wants. The City and school district should work together.

- ☐ **Inconsistencies:** The Planning Department is inconsistent with their application of rules. The City needs to speed up processing of applications. There is also an inconsistency in City services.
- ☐ **Public Relations Program:** The City needs to develop a public relations program to formulate positive press. Better marketing of the City is needed. The current perception is "no you can not do that".

3.7.4 Staff Issues

- ☐ **Other:** The Hispanic vote is split within the community which allows for the white minority to elect their candidates of choice.
- ☐ **Perception:** The City needs to recognize what Indio is and determine the problems. Evaluate current strengths and intensify positive impacts. Conduct surveys of the community and compare to other jurisdictions. The City must take time to let new policies work before recommending changes. The General Plan should provide a vision for the City but allow for change. The next two years will determine the direction that Indio is taking (General Plan, Shadow Hill, the mall).
- ☐ **Personnel:** City staff needs to be increased to allow for pro-active and not reactive decision making. A more up-to-date management style needs to be implemented. Review deficiencies in various departments and look for solutions.
- ☐ **Public Relations:** Because the courts are in town, crime is reported as if committed in Indio, whereas the crimes actually occur elsewhere.

3.7.5 Technical Issues

- **Development Code:** The City's zoning and related development standards should be comprehensively revised and updated in order to implement the updated General Plan.
- **Fast Track Approvals:** City needs to remove excessive red tape. Examples include reducing the number of entitlements that require a Conditional Use Permits (CUP), and allowing minor approvals, such as sign permits, to be handled at the staff level. Need to clearly define permitted uses and allow for more staff approvals.
- **Keeping Policies Current:** Develop an on-going program of public input on the General Plan and Development Code that will continue after the approval of these documents. In keeping with this, develop a program to maintain the currency of the General Plan, so that it continues to meet the aspirations and desires of those living and working in the community.
- **Public Relations:** Develop a public relations strategy that promotes the diversity planned for the community.

ENVIRONMENTAL RESOURCES

4.1 OPEN SPACE

4.1.1 Desire In A City

- **Natural Open Space:** A few individuals mentioned the desire to have natural open space areas available either within or adjacent to a community.

4.1.2 Assets

- **Beauty of Shadow Hills:** Several members of the public that were interviewed discussed the need to preserve natural open space within the planning area. The preservation of ridgelines and the natural beauty of the Shadow Hills were the only specifics mentioned.



View of the Shadow Hills as seen from Monroe Street and the I-10 Freeway off-ramp looking north.

- **City-Wide Trails:** Some of those interviewed discussed the opportunities in the community for the development of a City-wide trail system. These trails could run along the Whitewater River and/or the All-American Channel,

allowing access to natural open space areas surrounding the Planning Area.

4.1.3 Issues

No issues were identified by the public on this item.

4.1.4 Staff Issues

No issues were identified by the staff on this item.

4.1.5 Technical Issues

- **Maintain Open Space:** The City shall work to retain areas designated as open space under the new General Plan.
- **Open Space Designation:** The City should create an open space designation to define areas for open space use. This designation should work to provide:
 - ▶ open space recreational opportunities;
 - ▶ preserve sensitive natural resources, such as biological and cultural resources;
 - ▶ protect the scenic beauty of prominent features within the Planning Area; and,
 - ▶ protect the public from natural and man-made hazards, including seismic safety, floods and regional utility distribution corridors.
- **Open Space Within New Developments:** Promote the use of open space within public and private developments.

- **Preserve Shadow Hills:** The City should preserve the natural beauty of the Shadow Hills by preserving slopes and ridgelines that are prominent to the surrounding region.
- **Protect Water Resources:** The City needs to preserve and protect water resource areas including rivers and other natural drainage corridors.

4.2 SOILS

4.2.1 Desire In A City

The topic of soils was not mentioned in the public's discussion of what they would look for in a new community.

4.2.2 Assets

No assets were identified by the public on this item.

4.2.3 Issues

No issues were identified by the public on this item.

4.2.4 Staff Issues

No issues were identified by the staff on this item.

4.2.5 Technical Issues

- **Erosion Control Plans**: The City should work to decrease wind and water erosion. Erosion control plans should be required for new developments.
- **Plentiful Agricultural Soils**: Soils that are highly suitable to agricultural production are found in areas throughout the Planning Area, including lands designated as prime farmlands.



View of the vegetable, citrus, and date crops grown in the Shadow Hills area.

- **Salt Buildup**: The City needs to evaluate the impacts of salt buildup on agricultural lands and address means for reducing this buildup.

4.3 AGRICULTURAL RESOURCES

4.3.1 Desire In A City

The topic of agricultural lands or production within an area was not mentioned in the public's discussion of what they would look for in a new community.

4.3.2 Assets

- Individuals in various meetings did discuss the historic significance of agriculture to the City of Indio.

4.3.3 Issues

- A few groups discussed the future of agriculture in Indio, although no one took a position regarding its future.

4.3.4 Staff Issues

No issues were identified by the staff on this item.

4.3.5 Technical Issues

- **Environmentally Sensitive**: The City should require sound agricultural practices to minimize environmental disturbances and maximize production capabilities.
- **Farmland Classifications**: Large amounts of land within the Planning Area are designated as one of the following farmland classifications:
 - ▶ prime farmlands;
 - ▶ farmlands of statewide importance;
 - ▶ unique farmlands; and,
 - ▶ farmlands of local importance.

- **Future of Agriculture in Indio**: The City will need to protect and preserve agriculture resources if they want this use to continue in the Planning Area.



The date palm has been a long-time symbol of agriculture in Indio, but its commercial future in the City is not bright.

- **Urban-Agricultural Interface**: As urban development spreads into areas containing active agricultural uses, the City needs to provide for the continuation of existing agricultural uses. The City will also need to review new urban developments to ensure that proper buffers are provided to protect new users from adjacent agricultural uses.
- **Williamson Act Lands**: A few parcels in the Shadow Hills area are currently under Williamson Act contracts that restrict their conversion from agricultural to urban land uses. At the present time, all of these areas are under non-renewal, and the contracts will expire within the next decade.

4.4 WATER RESOURCES

This section deals with the use, conservation and protection of natural water sources and non-domestic water use. Refer to Section 3.3 (Infrastructure/Public Services) for a discussion of domestic water provision.

4.4.1 Desire In A City

The topic of water resources was not discussed by the public as being a desired element that would impact their decision on what would make a liveable city.

4.4.2 Assets

- ☐ A few individuals mentioned that Indio did not need to worry about water supply; that the Coachella Valley had a sufficient supply.

4.4.3 Issues

No issues were identified by the public on this topic.

4.4.4 Staff Issues

No issues were identified by the staff on this topic.

4.4.5 Technical Issues

- **Agricultural Conservation:** The City should encourage the conservation of water dedicated to agricultural production.
- **Efficient Water Use in Landscaping:** The City needs to encourage the efficient use of water on all public and private projects. In site landscaping, the use of turf areas should be limited and xeriscape landscaping techniques (drought tolerant plants, drip irrigation, etc.) should be used.
- **Groundwater Contamination:** The City needs to reduce the risk of chemical

contamination of groundwater aquifers and wells through appropriate policies regarding the storage, transfer, and disposal of hazardous wastes.

- **Groundwater Recharge:** The City should enhance its groundwater recharge facilities in order to offset the declining groundwater levels in the Coachella Valley. In keeping with this, the City should coordinate with CVWD and their recharge program.
- **Reclaimed Water Usage:** The City should encourage the use of reclaimed wastewater to irrigate landscaping on golf courses, roadway medians, rights-of-way, parks, and other large turf areas. Reclaimed water should also be considered for agriculture and man-made lakes and ponds.
- **Watertable Overdraft:** The Coachella Valley is currently in an overdraft situation. Water is being withdrawn from the natural underground storage than is being put back in through percolation.

4.5 BIOLOGICAL RESOURCES

4.5.1 Desire In A City

Biological resources were not mentioned in the discussions with the public on what items are desirable in a city.

4.5.2 Assets

No assets were identified by the public on this item.

4.5.3 Issues

No issues were identified by the public on this item.

4.5.4 Staff Issues

No issues were identified by staff on this item.

4.5.5 Technical Issues

- **Sensitive Biological Habitat Areas:** Several sensitive plant and animal habitat areas have been identified through the General Plan field studies, especially along the "oasis belt" at the foot of the Shadow Hills. Protection of these resources should be an important consideration in the General Plan. Refer to the General Plan's Environmental Setting Report for more specifics on the types of sensitive plants and animals that exist in the Planning Area.
- **Site Surveys:** The City should require site surveys in areas that have the potential to support sensitive plant or wildlife habitats or individuals.

4.6 ENERGY CONSERVATION

4.6.1 Desire In A City

Energy conservation was not mentioned by those interviewed as an item that they would look for in locating to a new city.

- **Promote Conservation:** The City needs to promote increased awareness throughout the community regarding the importance of energy conservation.

4.6.2 Assets

No assets were identified by the public on this item.

4.6.3 Issues

No issues were identified by the public on this item.

4.6.4 Staff Issues

No issues were raised by the staff on this item.

4.6.5 Technical Issues

- **Coordination with Energy Providers:** The City needs to coordinate with the various agencies that provide energy conservation services in the area, such as Riverside County's Community Action Agency, the Southern California Company, Southern California Edison, and Imperial Irrigation District. This will ensure that the public has available to it the most up-to-date information on weatherization and energy conservation.
- **Energy Conservation and Existing Development:** The City should encourage existing homeowners to continue to update their homes with energy conserving features.
- **Energy Conservation and New Development:** The City should ensure, to the extent feasible, that all new development in the Planning Area is equipped with the latest in energy saving technology and design.

4.7 MINERAL RESOURCES

4.7.1 Desire In A City

During the interviews conducted, mineral resources were not mentioned by the public as an item that would be considered desirable in a city.

4.7.2 Assets

No assets were identified by the public on this item.

4.7.3 Issues

No issues were identified by the public on this item.

4.7.4 Staff Issues

No issues were identified by the staff on this item.

4.7.5 Technical Issues

- **Designation of Significant Resources:** The City needs to designate important sand and gravel lands as resource recovery areas to prevent urbanization of these areas. The General Plan should also contain guidelines that protect other areas in the community from negative impacts that may be associated with such extractions (i.e., noise, truck traffic, visual resources).
- **Mitigation of Mining Impacts:** The City needs to work with operators of current and future mining concerns to ensure that the interests of the public are being upheld. This includes:
 - ▶ obtaining proper financial remediation to pay for damage to roadways caused by heavy truck traffic;
 - ▶ establishing truck routes for haul trucks;
 - ▶ ensuring that air quality degradations is being mitigated as prescribed by the

County mining permit, state law, fugitive dust ordinances, and Air Quality Management District rules.

- ▶ obtain proper screening of mine and storage areas to reduce aesthetic impacts on the surrounding area.

- **Protecting New and Existing Land Uses:** The City needs to minimize conflicts between the existing mineral resource activities in the Shadow Hills Sub-Area (the Granite Construction site) and new urban uses through appropriate land use designations and buffering.



Photo of the existing Granite Construction extraction site and construction equipment yard at the base of the Shadow Hills.

- **Remediation of Mined Lands:** The City needs to ensure proper remediation of closed mining activities.

4.8 CULTURAL RESOURCES

4.8.1 Desire In A City

- **Historic Resources:** Historical features are a desirable asset in a city.

4.8.2 Assets

- **Historic Center of Coachella Valley:** Indio is the oldest city in the Coachella Valley, and has played a vital role in the development of the Valley. Indio has many historic buildings.
- **Museum:** Indio has a good Museum and Cultural Center.

4.8.3 Issues

- **Historic Resources:** The Coachella Valley Museum and Cultural Center is under utilized, and more press is needed to generate interest. The City should capitalize on the historic aspects of downtown for a theme.



The Coachella Valley Museum and Cultural Center offers a number of exhibits on Indio, the oldest city in the Coachella Valley.

4.8.4 Staff Issues

- **Historic Resources:** The City needs to have a historic preservation program. As part of this program, the City should support the local

museum and help to widen its appeal with displays geared towards World War II, the railroad and the agriculture industry in Indio.

4.8.5 Technical Issues

- **Cultural Heritage Center:** The City should pursue the establishment of a larger cultural heritage center for the Coachella Valley, which could include the museum or similar facility. Potential themes for such a facility could include:
 - ▶ the railroad history within the area;
 - ▶ the World War II period;
 - ▶ bring water from Colorado River through the Coachella Valley;
 - ▶ agriculture; and,
 - ▶ Native American heritage.
- **Historic Districts:** The City should work to preserve and capitalize on some of its historic districts. A district(s) could be identified for active preservation, utilizing available state, federal, and philanthropic grants to repair and maintain the better buildings in the district.
- **Public Awareness of the Museum:** The City should work to improve public awareness of its historic museum through increased information to the public and coordination with specific groups which would benefit from trips to the museum, such as school children and seniors groups.
- **Land Acquisition:** The City Redevelopment Agency should take an active role in acquiring or assisting in the acquisition of more land in the vicinity of the museum.

PUBLIC HEALTH & SAFETY

5.1 NOISE

5.1.1 Desire In A City

The issue of noise was not mentioned in the interviews with the public as an item that would influence their choice of which city in a region they would choose to live in.

5.1.2 Assets

No assets were identified by the public on this item.

5.1.3 Issues

No issues were identified by the public on this item.

5.1.4 Staff Issues

No issues were identified by the staff on this item.

5.1.5 Technical Issues

- **Noise Standards:** The new General Plan needs to establish land use noise compatibility criteria and standards.
- **Project Review:** The new General Plan will require that the noise produced by a proposed project be considered in its review if it is adjacent to sensitive receptors.
- **Sensitive Receptors:** The City shall attempt to locate land uses that are sensitive to noise, such as residential uses, hospitals, libraries, and schools, away from major noise sources. In the Indio area, major noise producers include the I-10 Freeway, Highway 111, the

Bermuda Dunes Airport, the railroad tracks along East Valley Parkway, the Granite Construction site (mining and processing), and scattered stationary sources.

- **Truck Routes:** The new General Plan should designate truck routes in order to keep truck traffic on major roadways, and thereby decrease traffic noise in residential neighborhoods.



Indio roadways receive heavy use by trucks hauling agricultural and mineral products to regional markets.

5.2 AIR QUALITY

5.2.1 Desire In A City

- **Clean Air:** A few individuals mentioned the fact that the city in which they would chose to live would have clean air.

5.2.2 Assets

- **Clean Air:** Some did mention the fact that the Coachella Valley did have clean air, and that this was a benefit to the area.

5.2.3 Issues

- **Future Air Quality:** The same individuals that commented on the good quality of the air in the Coachella Valley also saw an increasing threat from the west. They feared that poor air from the Los Angeles basin was slowly moving further east, and that it may someday impact the air quality in the Valley.

5.2.4 Staff Issues

No issues were raised by the staff on this item.

5.2.5 Technical Issues

- **Adherence to Adopted Plans:** The City needs to achieve conformance with mandated pollution reduction plans, congestion management plans and transportation demand management plans. This includes attaching conditions of approval to projects that implement these plans.
- **Blowsand Mitigation:** The new General Plan will incorporate measures for alleviating blowsand and fugitive dust impacts, which may include vegetation windbreaks, walls, fences, vegetative and rock ground covers, and provision of irrigation.

- **Grading Permits:** The City shall review applications for grading permits within a designated fugitive dust blowsand hazard zone or any other area subject to wind erosion.
- **Promote Alternative Transportation:** The City needs to promote the use of bus, rail, high occupancy vehicles, and other forms of transit or telecommuting within the region in order to further reduce pollutants.
- **Regional Planning:** The City needs to coordinate with other jurisdictions in the Coachella Valley and the surrounding area to establish parallel air quality plans and implementation programs.
- **SEDAB:** The City shall cooperate with other jurisdictions in the South Coast Air Quality Management District and South East Desert Air Basin (SEDAB) to reduce the number of vehicle trips, reduce vehicle miles travelled, and reduce traffic congestion.
- **Sensitive Receptors:** The new General Plan needs to evaluate the siting of sensitive receptors, such as long-term health care facilities, retirement homes, hospitals, residences, and schools, in terms of vicinity to known air emersion sources, including freeways and intersections.

5.3 POLICE AND FIRE SERVICES

5.3.1 Desire In A City

- **Security**: A secure community with a low crime rate is desired in a city.
- **Public Safety**: A city should have a well funded police and fire force.

5.3.2 Assets

- **Good Public Safety**: Indio is as safe as other areas within the Valley. The City has the same crime level as the rest of the valley. Indio is perceived as dangerous because the courts are located in the City. Code enforcement is also better than in the past.

5.3.3 Issues

- **Increase Public Safety**: The City needs more police and fire protection. Gangs are on the rise. The crime rate should be lower. Downtown has the highest crime rate in the City.

5.3.4 Staff Issues

- **Fire Sprinklers**: Fire sprinklers should be required for new developments. This would prove to be cost effective for the City. The City should evaluate trade-offs that can be made to reduce the per unit costs of sprinklers.
- **Excessive Emergency Calls**: Fines should be levied on property owners of apartments for excessive calls for emergency services.

5.3.5 Technical Issues

- **Fire Service Areas**: Set a response time/service area standard for fire protection that is adequate to protect the health, safety, and property of those in Indio. The

implementation of a residential sprinkler requirement for new construction should be implemented to help increase the service area for each station, protect the safety of the public, and reduce direct costs to the City.

- **Police and Fire Manpower**: Maintain police and fire personnel levels and facilities in needed locations to protect the population of Indio.
- **Residential Fire Sprinklers**: The City needs to require fire sprinkles for all new residential development.
- **Code Enforcement**: Nuisance Ordinance is good and the enforcement should be strong. Conditional Use Permits (CUP's) are not enforced. A regular inspection schedule is needed.
- **Fire Standards**: Codification of fire standards is needed.

5.4 EMERGENCY PREPAREDNESS

5.4.1 Desire In A City

- ☐ **Public Safety:** A city should have a well funded police force and strong code enforcement.

5.4.2 Assets

No assets were identified by the public on this item.

5.4.3 Issues

- **Increase Public Safety:** The City needs more police and fire protection, especially to respond to major emergencies.

5.4.4 Staff Issues

- ☐ **Emergency Command Post.** Comments were made that the City should relocate and consolidate the emergency command post for the City to a more secure location.

5.4.5 Technical Issues

- **Emergency Response Plans:** The City needs to maintain emergency response plans to deal with the range of natural and manmade disasters that could strike this area.
- **Public Safety Personnel:** The City should continually strive to provide adequate, well trained, and properly equipped public safety personnel at all times.



Indio's Public Safety Center is the command post for emergency operations (Jackson St. and Dr. Carreon Blvd.).

5.5 HAZARDOUS MATERIALS

5.5.1 Desire In A City

The topic of hazardous materials was not mentioned by the public during the discussion on what makes a city a desirable place to live.

5.5.2 Assets

No assets were identified by the public on this item.

5.5.3 Issues

No issues were identified by the public on this item.

5.5.4 Staff Issues

No issues were identified by the staff on this item.

5.5.5 Technical Issues

- **Management and Disposal:** The City needs to insure the effective management and disposal of hazardous waste on a city-wide level. This includes both commercial wastes as well as household hazardous wastes.
- **Management Plans:** The City shall cooperate with Federal, State, and County hazardous waste management plans to protect the health, safety, and welfare of the public, the environment, and the economy of the City of Indio. Comprehensive plans including the monitoring, siting, and transportation of wastes in Indio should be prepared and updated regularly. Emergency response plans should also be prepared and updated to ensure the protection of the public.
- **Public Education:** The City should provide public education on the City's hazardous waste programs, and on what constitutes a hazardous waste.

5.6 GEOLOGY AND SEISMICITY

5.6.1 Desire In A City

- **Seismic Safety:** Although the respondents realized it was difficult to find an area free from some type of natural disaster potential, some felt they would not mind being in a location that was seismically stable.

regional aid programs to assist areas hardest hit by a seismic event.

- **Seismically Active Region:** The Planning Area contains the San Andreas fault. The portion of the San Andreas fault in the Coachella Valley is considered to be very active, and a major event, larger than the Landers quake, is expected next.

5.6.2 Assets

No assets were identified by the public on this item.

5.6.3 Issues

- **Seismic Activity:** Recent seismic activity in and around the Coachella Valley was mentioned by some as an issue.

5.6.4 Staff Issues

No issues were identified by the staff on this item.

5.6.5 Technical Issues

- **Building Safety:** The City needs to develop a program to identify and rehabilitate seismically vulnerable structures within the Planning Area.
- **Liquefaction:** Much of the current City lies on a liquefaction zone. This situation will constrain some development, and require additional construction safeguards.
- **Public Awareness:** The City should promote increased public awareness regarding seismic safety, and how to respond in case of an emergency.
- **Regional Coordination:** The City needs to coordinate and cooperate with other agencies within the county to assist in the mitigation of geologic and seismic hazards. These agencies should also prepare and update

5.7 FLOOD HAZARDS

5.7.1 Desire In A City

Flood hazards were not mentioned in the discussions with the public on what items are desirable in a city.

5.7.2 Assets

No assets were identified by the public on this item.

5.7.3 Issues

- **Coachella Valley Storm Channel:** Some discussion took place concerning the capacity of the Coachella Valley Storm Channel and La Quinta Storm Channel. The concrete lining of the channel was discussed, as was the historic flooding of portions of Indio.



Photo of the Whitewater River looking east from Monroe Street.

5.7.4 Staff Issues

No issues were identified by the staff on this item.

5.7.5 Technical Issues

- **Flood Planning:** The City shall cooperate with local, State, and Federal flood control agencies to reduce the potential for flood damage in the Planning Area.
- **Master Plan:** The City should develop a master plan for flood control improvements for the Planning Area.
- **On-Site Retention:** New projects should retain all runoff that is generated on-site.
- **Siting of New Facilities:** The City needs to maintain siting and development standards to reduce risk and damage from flood hazards within the Planning Area.

5.8 AIR HAZARDS

5.8.1 Desire In A City

Wind fugitive dust and blow sand, or the lack thereof, were not mentioned in the discussions with the public on what items they felt were desirable in a city.

5.8.2 Assets

No assets were identified by the public on this item.

5.8.3 Issues

No issues were raised by the public on this item.

5.8.4 Staff Issues

No issues were raised by the staff on this item.

5.8.5 Technical Issues

- **Wind Erosion.** Projects exposed to high winds will need appropriate mitigations to reduce wind erosion and dust during construction.
- **Wind Protection.** Wind screens or other protection will be needed for developments in areas prone to high winds, especially in areas subject to fugitive dust and blow sand.

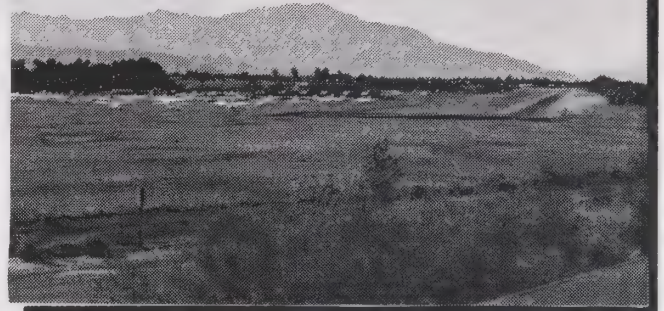
5.9 AIRPORTS

5.9.1 Desire In A City

- ☐ **Airport Proximity:** A few individuals mentioned the proximity to an airport as an important locational attribute.

5.9.2 Assets

- ☐ **Regional Airports:** A few individuals mentioned the Planning Areas proximity to the Thermal Airport and the Palm Springs Airport for regional transportation. The Bermuda Dunes Airport was discussed as an executive airport near the community and the polo grounds.



The location of the Bermuda Dunes Airport will constrain certain types of uses in its vicinity.

5.9.3 Issues

No issues were raised by the public on this item.

5.9.4 Staff Issues

No issues were raised by the staff on this item.

5.9.5 Technical Issues

- **Clearance:** The City needs to ensure strict adherence to the Federal Aviation Part 77 clearance criteria in relation to development around the Bermuda Dunes Airport.

HOUSING

6.1 DESIRE IN A CITY

- **Full Range of Housing Opportunities:** The housing opportunities in a city should be diverse. There should be a balance in housing costs between affordable and high-end.

6.2 ASSETS

- **Housing in Indio is Affordable:** The selection is improving and high-end housing is developing on the west side of the City.



Indio has a good supply of new housing suitable for the first-time home buyer, such as this tract starting in the \$80,000's.

6.3 ISSUES

- **Apartments/Rental Housing:** The majority of those interviewed thought that the City has too high a percentage of apartments and rental units. There are numerous old apartment units downtown that need renovation/replacement. The City should not allow any more low cost

apartments or at least needs to balance these units with the provision of units in other income levels. Many apartments do not have basic amenities such as washer/dryer hook-ups or laundry rooms. Many are not clean or safe.

- **Low Income Housing:** The quantity of low income housing in the City is an issue. While some respondents felt that there is too much low income housing in the City, others stated that there is a demand for more.
- **Single Family Residential:** The housing stock is not diverse. Indio needs more move-up housing. Develop estate size housing in Indio Ranchos. Mid-range homes priced between \$100,000 and \$200,000 should be constructed.
- **Other:** The City should encourage the development of resort developments and PUD's that provide recreational facilities, open space, parks and residential opportunities. The area near Mile's Park should be redeveloped with senior housing. Inadequate, unsafe housing should be condemned.
- **Recreational Vehicles (RV) Parks:** Lot owner RV parks are okay, however there should be more amenities in these parks.

6.4 STAFF ISSUES

- **Apartments/Rental Housing:** The City has a major problem with non-owner occupied housing. Develop a rental housing inspection program that requires yearly permits. Mandate an on-site manager live on the property. Create a lease which facilitates evictions.
- **Low Income Housing:** City has too high a percentage of low-income and sub-standard

housing in relation to the region. The City should actively participate in the decision making process to determine fair-share housing allocations to ensure that Indio is not unfairly burdened.

- **Mobile Homes:** Establish CC&R's for mobile home parks. Mobile home parks need to be monitored, not controlled.
- **Single Family Housing:** Develop up-scale housing in Indio Ranchos and Shadow Hills. The City should stimulate home ownership. The City should use redevelopment funds to encourage home improvements by matching homeowners contributions.

6.5 TECHNICAL ISSUES

- Greater range of residential housing types and products is needed.
- Multi-family rental developments need greater amenities on-site.
- Ratio of multi-family residential dwelling units and single family detached dwelling units should be looked at to provide the needed land use allocations in the future.
- Low and moderate income residential housing needs should be met by projects which provide on-site amenities, including:
 - ▶ on-site recreational activity centers;
 - ▶ open space areas;
 - ▶ adequate off-street parking facilities;
 - ▶ pleasant, attractive architecture and other design features; and
 - ▶ clean and safe surrounding.
- Need to address overcrowding.

REPORT PREPARATION

From a list of community leaders and interested persons provided by the City, a random selection of 60 persons was selected to participate in the initial issue interviews. Of those selected, the following 30 persons provided their insights and ideas into this process during a series of issue interviews.

June 2, 1992 (6PM)

Ms. Cardenas
Mr. Fox
Mr. Ellis
Mr. McKay
Mr. Meza
Dr. Morris
Mr. Silva

June 3, 1992 (9AM)

Mr. Estrin
Mr. Godfrey
Mr. Marsh
Mr. Virga
Mr. Wiseman

June 3, 1992 (2PM)

Mr. Brockman
Mr. Doria
Ms. Harmon
Mr. Hauser
Dr. McGrew

June 9, 1992 (2PM)

Mr. George
Mr. Gillespie
Mr. Green
Ms. Lambiel
Mr. Lord
Mr. Morgan

June 9, 1992 (6PM)

Mr. Acosta
Mr. Friestad
Mr. Goodson
Mr. Hanron
Mr. Kissner

Mr. Parkinson
Mr. Rummonds

In addition to the above mentioned persons, issue interviews were also conducted with the City Council, Planning Commission and all of the department heads for the various City departments.

Following these detailed interviews, several workshops were held with the general public. The following persons provided their inputs to the General Plan at these meetings:

Mr. Acosta	Mr. F. Gutierrez
Mr. & Mrs. Alvarez	Mr. G. Gutierrez
Mr. Amy	Mr. Gutierre
Ms. Astin	Mr. & Mrs. Harmon
Mr. Baum	Mr. Hollenbeck
Ms. Beal	Mr. Hurwitz
Mr. Berman	Ms. Jeansonne
Ms. Bethal	Ms. Kemmet
Mr. Briney	Mr. Martin
Mr. Carrillo	Mr. Mazzella
Mr. Chank	Mr. Mesa
Mr. Cover	Mr. Monneyham
Father Crafts	Dr. Morris
Ms. deLozier	Ms. Murphy
Mr. DiGrandi	Mr. Nesbit
Mr. DiLucchio	Mr. Neumeyer
Mr. Dressel	Mr. Pastion
Mr. Ellis	Mr. Preston
Mr. Estrin	Ms. Simpson
Ms. Fesmire	Mr. & Mrs. Smith
Mr. Ford	Ms. Wick
Mr. Fortner	Mr. Withrow
Mr. & Mrs. Godfrey	

For all of those who participated, many thanks for your interest and service to the community.

ENVIRONMENTAL IMPACT REPORT

Final Environmental Impact Report (FEIR)

1. Introduction Comments on the FEIR
2. Public Review of the DEIR
3. DEIR Comments and Responses
4. Addendum to the DEIR

Draft Environmental Impact Report (DEIR)

1. Introduction
2. Project Description
3. Community Development
4. Environmental Resources
5. Public Health and Safety
6. Housing
7. Cumulative Impacts
8. Alternatives
9. Long-Term Implications of the Proposed Project

INDIO GENERAL PLAN
FINAL ENVIRONMENTAL IMPACT REPORT
State Clearinghouse No. 93042057



Prepared by:

CHAMBERS GROUP, INC.

July 26, 1993

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PART I - INTRODUCTORY COMMENTS ON FINAL ENVIRONMENTAL IMPACT REPORT

I.1 CEQA COMPLIANCE

The Final Environmental Impact Report (EIR) for the City of Indio General Plan (State Clearinghouse No. 930420057) has been prepared in accordance with the California Environmental Quality Act (CEQA) and the guidelines for the implementation of CEQA.

Section 15132 of the CEQA Guidelines requires that a Final EIR contain the following information:

- (a) The Draft EIR or a revision of the draft.
- (b) Comments and recommendations received on the Draft EIR either verbatim or in summary.
- (c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
- (d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.
- (e) Any other information added by the Lead Agency.

I.2 FINAL EIR FORMAT AND ORGANIZATION

The Final EIR is comprised of four sections that meet the requirements of the CEQA guidelines as outlined above. Section I outlines the contents and organization of the Final EIR. Section II describes the public review conducted for the Draft EIR and provides a list of persons, organizations, or public agencies that commented on the Draft EIR. Section III contains all of the comments received on

the Draft EIR. Each comment received was reviewed by the City and the EIR consultant, and a response was prepared and included in this section to address each comment. The last section in the Final EIR, Section IV, contains a set of minor changes to the Draft EIR. The changes in this section are the result of staff and public review, and are meant to provide clarification of the analyses and mitigations within the Draft EIR. The changes within this section were not found to be substantial changes to the Draft EIR by the lead agency, and therefore, no recirculation of the Draft EIR is warranted.

In addition to the four sections described above, the Final EIR also contains a copy of the July 1993 Draft EIR immediately following Section IV. In reference to Section 15132 (a) above, this Draft EIR has been incorporated by reference into the Final EIR.

PART II - PUBLIC REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

II.1 PUBLIC REVIEW

The public review period for the Draft EIR began on July 28, 1993 and ended on September 13, 1993, covering the CEQA mandated 45-day public review period. A Notice of Completion of a Draft EIR was filed with the State Clearinghouse along with the required number of copies of the document for circulation to various agencies. Copies of the Draft EIR were also mailed directly to local agencies, groups, and individuals for review.

One additional letter is included from the State Clearinghouse. No response was necessary since this letter included the announcement of availability of the Draft EIR for review and comment. The letter from the State Clearinghouse acknowledges compliance of the City of Indio General Plan Draft EIR with the State's review requirement for draft environmental documents. The letter did not contain comments regarding the adequacy of the Draft EIR and did not raise any significant environmental points of discussion.

II.2 LIST OF PUBLIC AGENCIES, ORGANIZATIONS, AND PERSONS COMMENTING ON THE DRAFT EIR

The public agencies, organizations, and persons that have submitted comments on the Draft EIR are listed on Table II-1. The response to each of these letters is included in Section III. Comment letters received through September 13, 1993 have been responded to in this document.

Table II-1

AGENCIES, ORGANIZATIONS, AND PERSONS RESPONDING TO THE DRAFT EIR

STATE & REGIONAL AGENCIES	<p>1) South Coast Air Quality Management District Connie A. Day, Program Supervisor Planning and Technology Advancement</p> <p>2) State of California, Department of Fish and Game Fred Worthey, Regional Manager Region 5 Sharon Keeney, Fishery Biologist</p> <p>3) State of California, Department of Housing and Community Development Thomas B. Cook, Deputy Director Linda Wheaton</p> <p>4) Southern California Association of Governments (SCAG) Arnold I. Sherwood, Ph.D., Director Forecasting, Analysis, and Monitoring Maria Souza-Rountree</p>
COUNTY AGENCIES	None
LOCAL AGENCIES	<p>5) City of La Quinta, Planning Department Jerry Herman, Planning and Development Director</p>
ORGANIZATIONS	None
PERSONS	<p>6) Susan E. Williams, Urban Planning</p>

PART III - DRAFT ENVIRONMENTAL IMPACT REPORT COMMENTS AND RESPONSES

The comments on the Draft EIR and individual responses to each are included in this section. The primary objective and purpose of the EIR public review process is to obtain comments on the adequacy of the analysis of environmental impacts, the mitigation measures presented, and other analyses contained in the EIR. The majority of the comments received during the Draft EIR review related solely to the contents of the General Plan, and did not raise significant issues relative to the adequacy of the Draft EIR. Since these comments do not raise issues with the EIR, CEQA does not require a response in the Final EIR, but in the interest of clearing any questions raised by the public concerning the General Plan, and providing the decision makers with a clear view of the issues, comments relating to the analysis of General Plan issues in the EIR were responded to in this section.

The comments letters have been arranged into groups by respondent as shown on Table II-1. Aside from the courtesy statements, introductions, and closings, the text of each letter has been divided into individual comments. Brackets and identification numbers in the left margin of each letter delineate each comment. The document has been arranged so that the comment letter will appear first in the document followed by the associated responses.

xc R. Hunt
R. Floyd

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO, CA 95814

Orig G.P. file

RECEIVED

SEP 15 1993

COMMUNITY DEVELOPMENT
CITY OF INDIO

NR

September 10, 1993

Henry Hohenstein, AICP
City of Indio
100 Civic Center Drive
Indio, California 92201

Subject: City of Indio General Plan 2020, SCH# 93042057

Dear Mr. Hohenstein:

The State Clearinghouse submitted the above named environmental document to selected state agencies for review. The review period is closed and none of the state agencies have comments. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call Sara Stremple at (916) 445-0613 if you have any questions regarding the environmental review process. When contacting the Clearinghouse in this matter, please use the eight-digit State Clearinghouse number so that we may respond promptly.

Sincerely,

Christine Kinne

Christine Kinne
Deputy Director, Permit Assistance

Notice of Completion

Appendix F

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95811 916/445-0310

Form 9

90044061

Project Title: **INDIO GENERAL PLAN 2020**

Lead Agency: **CITY OF INDIO**

Street Address: **4824 LATHAM STREET, STE 140**

City: **INDIO**

Zip: **92561**

Contact Person: **HENRY ROENSTER**

Phone: **714-273-3344**

County: **RIVERSIDE**

Project Location

County: **RIVERSIDE**

City/Nearest Community: **INDIO**

Cross Street: _____ Total Area: _____

Assessor's Parcel No. _____ Section: _____ Twp. _____ Range: _____

Within 1 Mile: State Hwy. # _____ Waterways: _____

Airports: _____ Railways: _____ Schools: _____

Document Type

CEQA: ☒ NOP

☐ Early Conc

☐ Neg Dec

☐ Draft EIR

☐ Supplemental/Subsequent

☐ EIR (First SCH No.)

☐ Other _____

NEPA: ☐ NOI

☐ EIS

☐ Draft EIS

☐ FONSI

State: ☐ Joint Document

☐ Final Document

☐ Draft Document

Local Action Type

☐ General Plan Update

☐ General Plan Amendment

☐ General Plan Element

☐ Community Plan

☐ Specific Plan

☐ Master Plan

☐ Planned Unit Development

☐ Site Plan

☐ Reasons

☐ Prezone

☐ Use Permit

☐ Land Division (Subdivision, Parcel Map, Tract Map, etc.)

☐ Extension

☐ Relocation

☐ Change of Name

☐ Other _____

Development Type

☐ Residential: Units _____ Acres _____

☐ Office: Sq. ft. _____ Acres _____ Employees _____

☐ Commercial: Sq. ft. _____ Acres _____ Employees _____

☐ Industrial: Sq. ft. _____ Acres _____ Employees _____

☐ Educational _____

☐ Recreational _____

☐ Water Facilities: Type _____ MGD _____

☐ Transportation: Type _____

☐ Mining: Mineral _____

☐ Power: Type _____ Watts _____

☐ Waste Treatment: Type _____

☐ Hazardous Waste: Type _____

☐ Other _____

Project Issues Discussed in Document

☐ Aesthetic/Visual

☐ Agricultural Land

☐ Air Quality

☐ Archeological/Historical

☐ Coastal Zone

☐ Drainage/Absorption

☐ Economic/Jobs

☐ Fiscal

☐ Flood Plain/Flooding

☐ Forest Land/Fire Hazard

☐ Geologic/Seismic

☐ Minerals

☐ Noise

☐ Population/Housing Balance

☐ Public Services/Facilities

☐ Recreation/Parks

☐ Schools/Universities

☐ Septic Systems

☐ Sewer Capacity

☐ Soil Erosion/Compaction/Grading

☐ Solid Waste

☐ Toxic/Hazardous

☐ Traffic/Circulation

☐ Vegetation

☐ Water Quality

☐ Water Supply/Groundwater

☐ Wetland/Riparian

☐ Wildlife

☐ Growth Inducing

☐ Landuse

☐ Cumulative Effects

☐ Other _____

Present Land Use/Zoning/General Plan Use

Project Description

Indio General Plan 2020

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g., from a Notice of Preparation or previous draft documents) please fill it in.

Revised October 1995

Fish and Game - Division 1

Gary M. Long, District 1
Division of Fish and Game
P.O. Box 1
Redding, CA 96001
916/225-2100 (8-412)

John P. Sweeney, District 2 and 3
Division of Fish and Game
1701 Nimbus Road, Suite 4
Palo Alto, CA 94301
916/353-6222 (8-435)

D. Hunter, Regional Manager
Department of Fish and Game
P.O. Box 47
Yreaville, CA 94529
916/744-5318

D. McKee, Regional Manager
Department of Fish and Game
1734 Post Shaw Avenue
Fresno, CA 93710
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Frank A. Woodbury, Jr., Regional Manager
Department of Fish and Game
330 Golden Shore, Suite 50
Long Beach, CA 90802
213/590-5113 (8-635)

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California Energy Commission
1516 Ninth Street, 145-15
Sacramento, CA 95811
916/554-3859

Native American Heritage Comm.
715 Capitol Mall, Room 264
Sacramento, CA 95814
916/553-4012

William Meyer
Public Utilities Commission
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San Francisco, CA 94102
415/703-1510 (8-597)

Fatty Eubanks
State Lands Commission
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Sacramento, CA 95814
916/322-2755

Boat, Transportation, & Harbors

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916/324-1833

Tom Moore
California Highway Patrol
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Planning and Analysis Division
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916/337-7222

Ron Helgeson
California - Planning
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Department of Transportation

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San Diego, CA 92186-5106
619/598-6750 (8-641)

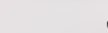
Allen Kennedy
California, District 12
2501 Polman St
Santa Ana, CA 92705
714/724-2232 (8-655)

Food and Agriculture

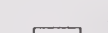


Vashek Cervlaka
Dept. of Food and Agriculture
1220 N Street
Sacramento, CA 95814
916/322-5227

Health & Welfare

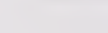


Quy Tu
Dept. of Health
601 N. 7th Street, PO Box 942732
Sacramento, CA 94234-7320
916/324-2322



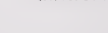
DISSECT

State and Consumer Services



Robert Sleppy
Dept. of General Services
400 P Street, Suite 5100
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916/324-0214

Environmental Affairs

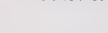


Barbara Fry
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916/322-8267



Jeanie Agpoon
Calif. Waste Management Board
8800 Cal Center Drive
Sacramento, CA 95826
916/255-2439 916/255-2341

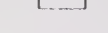
State Water Resources Control Board



Allan Patton
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Dave Berlinger
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916/657-0912



Mike Falkenstein
State Water Resources Control Board
Division of Water Rights
908 P Street, 3rd Floor
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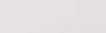


AFCD/AQMD

San Jose Water District



NORTH COAST
5350 Skyline Blvd.
Santa Rosa, CA 95403
707/576-2220 (8-590)



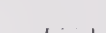
SAN FRANCISCO BAY REGION (2)
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Oakland, CA 94612
415/554-1255 (8-561)



CENTRAL COAST REGION (3)
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San Luis Obispo, CA 93101-5427
805/549-3147 (8-629)



LOS ANGELES REGION (4)
1075 S. Broadway, Rm. 4027
Los Angeles, CA 90012
213/266-4460 (8-640)



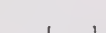
CENTRAL VALLEY REGION (5)
3443 Rautier Road, Suite A
Sacramento, CA 95827-3098
916/361-5609



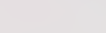
Fresno Branch Office
3614 East Ashlan Avenue
Fresno, CA 93726
209/445-5116 (8-421)



Redding Branch Office
415 Knollcrest Drive
Redding, CA 96002
916/224-4845 (A1S-441)



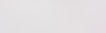
LAHOREAN REGION (6)
2022 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150
916/544-3481



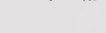
Victorville Branch Office
15428 Civic Drive, Suite 100
Victorville, CA 92392-2359
619/241-6583



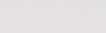
COLORADO RIVER BASIN
REGION (7)
73720 Fred Waring Drive, #100
Palm Desert, CA 92260-2564
619/346-7491



SANTA ANA REGION (8)
2010 Iowa Avenue, Suite 100
Riverside, CA 92507
714/782-4130 (8-632)



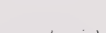
SAN DIEGO REGION (9)
9771 Clairemont Mesa Blvd., Suite B
San Diego, CA 92124-1331
619/265-5114 (8-636)



OTHER:



OTHER:



OTHER:



South Coast
AIR QUALITY MANAGEMENT DISTRICT

21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

July 30, 1993

Mr. Bill Northrup
City of Indio
100 Civic Center Mall
P.O. Drawer 1788
Indio, CA 92202

Dear Mr. Northrup:

RE: Indio General Plan 2020

SCAQMD# RVC930729-01

Due to staffing cutbacks the SCAQMD is unable to comment on your project at this time. SCAQMD staff recommends that you follow the procedures and methodologies set out in the SCAQMD CEQA Air Quality Handbook (April 1993). Utilizing the information in the Handbook will assist you in adequately addressing the potential air quality impacts of your project. The Handbook will be updated periodically, in an effort to assist your staff in evaluating air quality impacts that may result from land use projects.

The District staff will, however, make every effort to evaluate projects of a regional nature. We are available to answer any questions you may have regarding the use of the CEQA Handbook. Please feel free to contact the Local Government - CEQA section at (909) 396-3109 for assistance.

Sincerely,

Connie A. Day
Program Supervisor
Planning & Technology Advancement

CAD:li

RECEIVED

AUG 3 - 1993

REDEVELOPMENT AGENCY
CITY OF INDO

RESPONSES TO COMMENT LETTER NO. 1

South Coast Air Quality District

1-1 Comment noted.

STATE OF CALIFORNIA—THE RESOURCES AGENCY

PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME

330 GOLDEN SHORE, SUITE 50
LONG BEACH, CA 90802

(310) 590-5113

RECEIVED



SEP 08 1993

September 8, 1993

COMMUNITY DEVELOPMENT
CITY OF INDIOMr. Henry Hohenstein, AICP
City of Indio
100 Civic Center Drive
Indio, California 92201

Dear Mr. Hohenstein:

Draft Environmental Impact Report (DEIR) for
General Plan 2020, City of Indio
SCH 93042057, Riverside County

The Department of Fish and Game (Department) has reviewed the referenced DEIR. The Planning Area for the General Plan consists of the existing City limits, the City's existing sphere-of-influence, and additional unincorporated lands having a direct impact on the City. The Planning Area covers approximately 41.5 square miles.

The Department is concerned with possible impacts to the Coachella Valley fringe-toed lizard (*Uma inornata*), a threatened species, and the Flat-tailed horned lizard (*Phrynosoma mcallii*), a Category 1 candidate for the Federal list. California Environmental Quality Act (CEQA), Section 15380, requires that the Horned lizard be viewed as though it were listed if the species meets the criteria for listing as described in the section.

The Coachella Valley Fringe-toed lizard Habitat Conservation Plan (HCP) was developed to ease the conflict between land development and conservation of the lizard's habitat. All zoning in the General Plan must be in compliance with the HCP.

Thank you for the opportunity to comment on the DEIR. If you have any questions, or need a copy of the HCP, please contact Ms. Sharon Keeney, Fishery Biologist, at (619) 347-3145.

Sincerely,

Fred Worthley
Regional Manager
Region 5

cc: See attached list

Mr. Henry Hohenstein
September 8, 1993
Page Two

cc: Ms. Sharon Keeney
Fishery Biologist
Indio, California

Mr. Terry Foreman
Fishery Biologist
Ramona, California

Mr. Gerry Mulcahy
Wildlife Biologist
Blythe, California

Ms. Terri Dickerson
Environmental Specialist III
San Diego, California

Mr. Jim Dice
Plant Ecologist
San Diego, California

U.S. Fish and Wildlife Service
Carlsbad, California

State Clearinghouse
Sacramento, California

RESPONSES TO COMMENT LETTER NO. 2

Department of Fish and Game

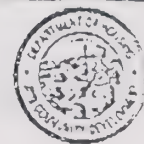
- 2-1 Comment noted. Implementation Measure 1.0 under Biological Resources in the Goals and Policies Section of the General Plan, which is also the mitigation for the impacts to biological resources, indicates that a biological study is required for development within areas which have a moderate to high potential to contain sensitive habitat. This is a requirement of the environmental process on all future development within the City.

The Environmental Setting Report and Draft EIR recognizes these species as sensitive. Table 4.5-2 in the Environmental Setting Report indicates the Coachella Valley fringe-toed lizard as a federal threatened species, and the Flat-tailed horned lizard as a Category 1 candidate for the federal list.

- 2-2 The majority of the Planning Area that is in closest proximity to the Coachella Valley Fringed-toed lizard Habitat Conservation Reserve is currently under construction as a 1,530 acre planned community referred to as Del Webb Sun City (refer to the Land Use Diagram Figure 2.2-1.). The Sun City development was preapproved under the jurisdiction of the County of Riverside (SP 281). The Indio General Plan maintains this area with a specific plan designation on the General Plan Land Use Diagram.

STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY

PETE WILSON, Governor

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF HOUSING POLICY DEVELOPMENT1800 THIRD STREET, Room 430
P.O. BOX 952053
SACRAMENTO, CA 94252-2053
(916) 323-3176 FAX (916) 323-6625

September 10, 1993

Mr. Hank Hohenstein

City of Indio

Mr. Hank Hohenstein
Community Development Director
City of Indio
100 Civic Center Mall
P.O. Drawer 1788
Indio, California 92202

Dear Mr. Hohenstein:

RE: Draft Environmental Impact Report for the City of
Indio's July 1993 Draft General Plan

Thank you for submitting Indio's Draft Environmental Impact Report (DEIR) and General Plan, received for our review on July 29, 1993. This letter represents our comments on the General Plan DEIR, pursuant to Sections 15021, 15086, 15087, 15092, 15205, and 15206 of the 1992 CEQA Guidelines.

As you may be aware, this Department's statutory authority pursuant to CEQA include housing displacement and environmental effects with special impact in low-income neighborhoods, and regional comprehensive planning.¹ This letter references several issues addressed in more detail in our September 10, 1993 letter to Mr. Frederick Diaz, City Manager regarding our review of the housing element portion of the plan which has been sent under separate cover. Our concerns, which are inter-related, are described below, followed by reference to relevant sections of the CEQA Guidelines in parentheses at the end of each issue.

1. Conformance With General Plan Law

One of the public objectives cities are obligated to balance in adoption of a general plan EIR is "the goal of providing a decent home and satisfying living environment for every Californian." This Department finds that the draft general plan is not in compliance with State law implementing this goal through the general plan's housing element, pursuant to Government Code Section 65583 in particular. See our September 10, 1993 letter referenced above. (15020)

3-1

¹ See CEQA Statutes and Guidelines, 1992, Section 15205 and Appendix B.

The draft plan has not, for example, identified the availability of adequate sites to accommodate its regional housing need allocation pursuant to Government Code Section 65583(a)(3) (see item A.4. of our letter). This inadequacy is in part because the draft plan does not, as it should, assess the existing and proposed incorporated area of the City of Indio, distinct from the conditions of the Planning Area proposed for the City. The prospective incorporated boundaries should be analyzed relative to the City's statutory housing element planning periods pursuant to Government Code Section 65588.

3-2

The City's direct exercise of land use regulation of residential development for its general plan is largely restricted to the area within its incorporated boundaries. Absent analysis of environmental impacts affecting the incorporated City, the DEIR fails to adequately disclose and consider the locational effects of projected impacts most directly within the City's control. (15125)

2. Downzoning

The proposed revision of the City's residential land use designations can be anticipated to induce changes in population distribution and concentration within the City and the East Coachella Valley because of the impact of these standards on housing affordability. The resulting population distribution can be anticipated to lead to direct or indirect significant environmental effects.

3-3

The plan proposes a substantial reduction in permitted residential densities, particularly affecting the "high" density designation. Multifamily housing, rental housing in particular, is most commonly feasible and built within the highest land use designations. The EIR should analyze whether the reduced densities will create nonconforming uses and the effects of this on conservation of the City's existing housing stock (e.g., see item A.5.b. of our housing element review letter).

The reduced residential density designations of the plan will reduce the number of units which will be permitted within housing subdivisions and within individual apartment buildings. Because of the relationship of land costs and housing affordability, this will increase the cost of new housing construction, which in turn will reduce the supply of new housing affordable to lower-income households.

3-4

Mr. Hank Hohenstein
Page 3
(corrected 9/13)

As indicated in the plan, the primary existing and projected employment growth sectors of the City and Coachella Valley include high proportions of low-wage jobs (retail, resort, service industries). The plan and 1990 Census data (see our housing element review letter) indicate an existing unmet need for housing affordable to low-income households which can be expected to continue, particularly given the composition of projected employment growth. (15131)

3-4

3. Regional Impacts

The reduced densities of the residential land use designations, as compared to the City's existing designations, will contribute to a sprawling, versus compact, urban development pattern within the East Coachella Valley. This pattern will have higher vehicle-miles travelled (VMTs), affecting air quality.

This is a matter of regional significance, and would affect neighboring jurisdictions, including their air quality, transportation and other infrastructure improvement needs and costs. To the extent these improvements are financed through development fees and exactions or special assessments on property owners, the costs of these improvements will be a contributing factor to increased housing costs. Housing which could otherwise have been constructed affordable to lower-income households may be infeasible. This will increase demand on the existing housing stock of the City and neighboring jurisdictions, and cause increased housing costs in the existing stock, which will lead to increased overcrowding (see item A.1. of our housing element review letter), and displacement of very low-income households. (15131, 15206)

3-5

4. Analysis of Alternatives

The basis for the determination that the "Low Density Alternative" would be the environmentally superior alternative is not adequately supported. Measures other than reduction in the number of housing units must be analyzed to effectively evaluate the alternatives and mitigation measures which balance other statutory mandates and public policy objectives of the City. The comparative analysis of the alternatives does not consider the issues discussed above in this letter. (15020, 15092(c))

3-6

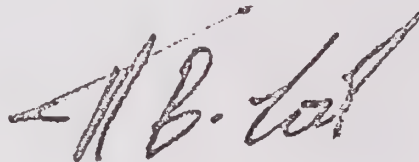
Mr. Hank Hohenstein
Page 4

Because of these concerns, we request additional analysis of the above issues in the FEIR, and recommend a higher-density alternative than the proposed plan should be analyzed. We hope our comments are helpful to the City. If we can provide any additional information or assistance, please contact Linda Wheaton, of our staff at (916) 327-2642.

3-7

In accordance with requests pursuant to the Public Records Act, we are forwarding copies of this letter to the persons and organizations listed below.

Sincerely,

A handwritten signature in dark ink, appearing to read "T.B. Cook", with a stylized flourish at the end.

Thomas B. Cook
Deputy Director

cc: Thomas C. Ryan, The Chambers Group

RESPONSES TO COMMENT LETTER NO. 3

Department of Housing and Community Development

- 3-1 This comment refers to the objectives of the General Plan and not the EIR.
- 3-2 This comment is not related to the Draft EIR; however, the responder has chosen to respond to the comment nevertheless. According to the State of California General Plan Guidelines, "California state law requires each city to adopt a general plan for the physical development within the boundaries of the adopting city as well as any land outside its boundaries which in the planning agency's judgement bears relation to its planning" (Government Code Section 65300). A city's planning area boundary includes incorporated and unincorporated territory bearing a relation to a city's planning. Where desirable, the planning area may extend beyond the city's sphere-of-influence. State law requires the general plan to take a "long-term" perspective (Government Code Section 65300). The time frames for effective planning vary according to the issues at hand. Fifteen to twenty-five years are generally used by most jurisdictions as the planning period for the general plan.

The City is planning for an area that will more than double its city limits in the next twenty-seven years. Approximately 138 percent of the City of Indio Planning Area is outside of the current city limits. The Planning Area of the proposed general plan is 41.5 square miles. The current city boundary covers an area of 19.8 square miles. Of the total 21.7 square miles currently not within the city limits, 19.7 square miles is in the city's sphere-of-influence and 2.0 square miles is outside the city's sphere-of influence. Four square miles outside the City's boundaries has already been planned by the County of Riverside and another 9.0 square miles is planned as open space or resource recovery in the proposed general plan. The 2.0 square miles outside of the city's sphere-of-influence encompasses a large planned development which has been approved by the County of Riverside and is currently under construction. It is the City's opinion that including the 2.0 square miles outside the sphere-of-influence area in its proposed general was appropriate because this area is a part of a contiguous master planned development.

- 3-3 The proposed general plan does provides an implementation measure in the community development section of the goals and policies section of the document which addresses nonconforming uses. It reads as follows "Allow for the continuation of preexisting uses in order for property owners to continue use of their property, while encouraging compliance with the City's General Plan and Zoning Ordinance for future development." Residential densities have been amended. Please refer to Response No. 3-5.
- 3-4 Comment noted. Refer to Response No. 3-5.
- 3-5 Reduced densities do not necessarily constitute sprawl. Higher density developments can be placed in areas that are not accessible to public transportation, commercial areas, or places of employment. This is not the case in the proposed plan. Medium to high density residential designations were planned in areas that will intermix with lower density residential designations, commercial and business office development.

Revisions relating to land uses in the proposed general plan have occurred since the publishing of the draft plan. The High Density residential (RH) designation has been amended to allow 20 units per acre. RH is now allowed in the Downtown Commerce designation and the commercial overlay on the west end of Highway 111. A mixed use (MU) designation has been added to 120 acres north and adjacent to Interstate 10 which will also allow high density development. The residential planned unit development areas (RPD's) in the Shadow Hills area north of Interstate 10 allow for residential density transfers from areas that have development constraints such as flood ways and fault zones into buildable areas through

planned unit developments, master plans and specific plans. Residential land uses within these master planned areas can contain high density residential developments such as apartments, condominiums and townhouses in combination with lower density residential development. The proposed plan provides the community the opportunity to provide a mixture of residential densities throughout the planning area without concentrating the residential higher densities all in one general area.

It is the siting of land uses and not densities that drives transportation and indirectly air quality impacts. There was a comprehensive analysis of traffic and air quality within the EIR. A traffic model was formulated and included in Appendix B in the General Plan document, which was based on projected traffic generated by the proposed land uses and densities. An air quality analysis based on the projected traffic was prepared and is included in Appendix F of the document. Regional impacts on air quality were addressed in Section 5.2 in the Environmental Impact Report.

3-6 Comment noted. The analysis of Housing in the Low Density Alternative has been revised to include the following:

- **Housing** - Implementation of this alternative will result in an increase in dwelling units over the current plan similar to that of the proposed plan (56,060 with the proposed plan and 25,784 with the Low Density Alternative). As with the proposed plan, this alternative proposes a more even distribution of residential densities throughout the Planning Area. The densities proposed with this alternative are less than with the proposed plan. This alternative ~~would result in similar impacts to housing~~ may result in negative impacts to housing affordability due to the relationship of lower housing densities and land costs.

Level of impact as compared to the proposed plan: ~~Similar~~ More

Table 8-1.1 in the Alternatives Section 8 of the EIR has been amended under Housing for the Low Density Alternative to state "More" to replace "Similar".

The alternative analysis did consider the impacts to traffic/circulation, air quality, land use, and infrastructure. Refer to pages 8-7 through 8-12 in Section 8.2 and to the Alternatives Comparative Matrix Table 8.1-1 on page 8-2 of the Draft EIR.

3-7 Comment noted. Changes were made where appropriate in the Final EIR. The Higher Density Alternative was analyzed, please refer to pages 8-19 through 8-25 in Section 8.4 of the Draft EIR.



818 West Seventh Street, 12th Floor • Los Angeles, California 90017-3435 • (213) 236-1800 • FAX (213) 236-1825

4

September 10, 1993

Mr. Henry Hohenstein, AICP
City of Indio
100 Civic Center Mall
P.O. Drawer 1788
Indio, CA 92202

RE: Comments on the Draft Environmental Impact Report (DEIR) for the City's General Plan Update
SCAG Clearinghouse #I9300397

Dear Mr. Hohenstein:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the City of Indio General Plan. As the areawide clearinghouse for regionally significant projects, SCAG assists cities, counties, and other agencies in reviewing projects and plans for consistency with the Regional Mobility Plan (RMP), the Growth Management Plan (GMP), the Regional Housing Needs Assessment (RHNA), and conformity with the applicable Air Quality Management (AQMP) Plan.

The attached comments are meant as administrative staff comments to provide guidance for completing the proposed General Plan within the context of our regional goals and policies, which are based in part upon state and federal mandates. If you have any questions, please feel free to call Maria Souza-Rountree at (213) 236-1838. She will be happy to assist you in addressing the comments made herein.

Sincerely,

ARNOLD I. SHERWOOD, Ph.D.
DIRECTOR
Forecasting, Analysis, and Monitoring

Goddard, Orange County President, Stella Mendoza City of Brawley-First Vice President, Ed Edelman Los Angeles County-Second Vice President, John Longville City of Rialto-Past President, Richard Alarcon City of Los Angeles, Richard Alarcon City of Los Angeles, Robert Bartlett City of Menlo Park, George Bosa City of Bell, Ronald Bates City of Los Alamitos, George Batty, Jr. City of Burbank, Hal Bernson City of Los Angeles, Walter Bowman City of Cypress, Marvin Brando City of Los Angeles, Susan Brooks City of Rancho Palos Verdes, Ari Brown City of Buena Park, Yvonne Bruthwalter-Burke Los Angeles County, Jim Busby, Jr. City of Victorville, Bob Buster Riverside County, Laura Chick City of Los Angeles, John Cox City of Newport Beach, Cynthia Crothers City of Moreno Valley, Elmer Dignee City of Loma Linda, Richard Dixon City of Lake Forest, Douglas Drummond City of Long Beach, Jerry Bayes San Bernardino County, John Ferraro City of Los Angeles, John Flynn Ventura County, Terry Frazal City of Riverside, Ruth Galanter City of Los Angeles, Sandra Genis City of Costa Mesa, Jackie Goldberg City of Los Angeles, Candace Haggard City of San Clemente, Garland Hardeman City of Inglewood, Robert Hargrave City of Long Beach, Mike Hernandez City of Los Angeles, Nate Holden City of Los Angeles, Robert Jamison City of Anaheim, Jeff Keflogg City of Long Beach, Jim Kelly City of South St. Monica, Richard Kelly City of Palm Desert, Bob Kufia City of Glendale, Abby Lund City of West Hollywood, Darlene McBane City of Agoura Hills, John Melton City of Santa Paula, Barbara Mewlina City of Alhambra, Judy Mikels City of Simi Valley, David Myers City of Palmdale, Kathryn Nuck City of Pasadena, Roy Perry City of Brea, Gwenn Norton-Perry City of Chino Hills, Ronald Purks City of Torrance, Larry Rhinehart City of Montclair, Dick Riordan City of Los Angeles, Mark Ridley-Thomas

SCAG COMMENTS ON THE NOP FOR THE CITY OF INDIO'S GENERAL PLAN UPDATE

LOCATION

The City of Indio is located in Riverside County, approximately 120 miles directly east of Los Angeles and 15 miles east of Palm Springs. Adjacent jurisdictions include the City of La Quinta to the west, an unincorporated area of Riverside County to the south, the City of Coachella to the east, and unincorporated county land to the north.

DESCRIPTION

The City's existing general plan, adopted in 1978, has become outdated because of population growth, physical expansion of the City, changes in the desired direction for the City's future, and new requirements for general plan elements by the State of California. The planning area for the proposed General Plan Update includes land within the existing City limits, the City's sphere of influence, as well as a portion of unincorporated land that has a direct impact on the City. The total planning area covers approximately 41.5 square miles, of which 19.8 square miles are currently in the City of Indio. The proposed plan is a 27 year plan, with buildout estimated in 2020.

The planning area population in 1992 was 42,099. Buildout of the proposed Plan will yield a maximum of 174,356 residents. This population increase of 314 percent is the result of the dramatic increase in the amount of residential, commercial, and industrial land uses. The increase in residential land uses is expected to occur mostly on land that is currently unimproved or used for agricultural production. Currently, agriculture and unimproved land is the most common existing land use in the planning area. Consequently, the adoption of the proposed general plan will dramatically change the character of the planning area. Particularly important is the fact that the proposed General Plan does not propose any agricultural uses. Existing agricultural uses occupy just under 23 percent of the planning area, which are located at the outer edges of the community. The decreasing importance of agricultural production to the community has caused the community to transition the lands to urban uses.

It is important to note that although the proposed Plan will increase development within the planning area, large tracts of land in the northern portion of the planning area, adjacent to Indio Hills, will remain as open space. This is intended to protect the area from visual intrusion and the degradation of wildlife habitats.

LAND USE	EXISTING	BUILDOUT	PERCENTAGE INCREASE
Residential	10.9%	50%	416%
Commercial	2.4%	7%	194%
Industrial	1.5%	3%	152%
Public	3.1%	4%	122%
Open Space ¹ /Agriculture/Other	82.1%	34%	N/A
Total	100%	100%	

looks like same as last

¹ Although the percentage of land in this category appears to decrease in the proposed Plan, under the current general plan land use designations, agricultural uses are considered open space. The Proposed Plan does not designate agricultural land uses or include agricultural lands in its open space designation. The other increases in other publicly usable open space categories have greatly increased.

REGIONAL PLAN POLICIES

There are a number of policies expressed in the GMP that are particularly relevant to this project. Among them are policies that would:

- Promote future patterns of urban development and land use that reduce costs of infrastructure construction and make better use of existing facilities, and to achieve a good match between future growth and the phasing of new facilities or expansion of existing ones.
- Encourage growth to occur in and around:
 - activity centers
 - transportation node corridors
 - underutilized infrastructure systems
 - areas needing recycling and redevelopment
- Encourage mixed-use developments and other planning techniques to make employment centers easy to walk to or reach by transit
- Achieve better job/housing balance at the subregional level through
 - encouragement and provision of incentives to attract housing growth in jobs-rich subregions
 - encouragement and provision of incentives to attract job growth in housing-rich subregions

- 14-189 CITY OF INDIO P. 19
- To the degree possible, achieve a balance, by subregion of the type of jobs with the price of housing.

Jobs/Housing Balance

The City is located in the Riverside Desert Subregion. In 1984, the jobs/housing balance ratio for this subregion was 0.71. The subregional ratio is expected to reach 0.75 in 2010. According to the GMP in 2010, the City is projected to have a jobs/housing ratio of 0.72, based on employment and housing figures included in the document. The DEIR states that the City is projected to have a jobs/housing ratio of 0.84 by buildout. In addition, this ratio increases to 1.05 when seasonal residency is excluded, according to the DEIR.

4-1

It should be noted that when future growth takes place, housing development should be kept in balance with the increase in jobs to restrain the amount of growth of vehicle miles traveled (VMT) to the extent feasible. Therefore, the Final EIR should include a pricing analysis to ensure residential, commercial, and industrial development occur concurrently.

4-2

Water Supply and Distribution: Implementation of the proposed General Plan will result in an increased demand for domestic water by both residential and commercial users. Water line extensions into undeveloped areas, creation of new pressure zones, and upgrades to the existing system will be required by the City of Indio and the Coachella Valley Water District (CVWD). The future demand for water usage will be monitored through the development review process. This will ensure adequate service for new development. It will be important to ensure that existing land uses are not negatively affected as development occurs.

4-3

Sanitary Sewage: The Valley Sanitary District (VSD) and CVWD are the sewer service purveyors for properties within the planning area. Implementation of the proposed Plan will increase demand for sewer service from approximately 4.3 million gallons per day (MGD) to 17.8 MGD. The analysis of treatment plants in the DEIR appears to be adequate to treat the increase in sewage.

4-4

Stormwater Drainage: Due to the land development that will occur as a result of the implementation of the proposed Plan, an upgrade to the existing storm drain system and the construction of additional storm drain facilities by the City of Indio and the CVWD will be necessary.

4-5

Solid Waste Disposal: The solid waste collection and disposal services for the planning area are operated and administered by the Waste Management of the Desert (WMD) and Western Waste Industries. Solid waste from the City of Indio is hauled to the Coachella Sanitary Landfill, which is expected to reach capacity by the year 2014. The DEIR does not identify the amount of waste estimated to be generated by future development at buildout. This should be examined to estimate if the available landfill space is adequate for the proposed plan buildout.

4-6

Analysis

The proposed General Plan Update appears to be consistent with the GMP's jobs housing balance policies at this time. Mention should be made in the Final EIR of any initiative by the City of Indio to enter into arrangements with other cities in the Riverside Desert Subregion to address growth management planning. This is one of the key programs of the GMP and should be considered as a possible mitigation measure for the traffic and circulation impacts of the General Plan Update.

4-7

TRANSPORTATION DEMAND MANAGEMENT

The DEIR addresses the conformity of the proposed plan as part of the South East Desert Air Basin (SEDAB) and as the desert part of the South Coast Air Quality Management District Coachella Valley, and certain programs are recommended as mitigation measures for long term sources/mobile sources. The General Plan complies with the required measures set for Particulate Matters (PM_{10}) and Ozone. In addition, the general Plan was analyzed for the year 2010 with regard to Carbon Monoxide (CO) and Sulfur Dioxide.

4-8

The City of Indio has adopted and is implementing a PM_{10} Plan, which calls for a number of particulate control measures aimed at reducing manmade sources.

FINDINGS

SCAG finds that the proposed General Plan Update and DEIR is consistent with the goals, objectives, and policies of the applicable regional plans at this time.

4-9

CONCLUSION

If the City of Indio General Plan Update is approved, it is requested that SCAG be notified of the City Council's action so that the implications for the Comprehensive Regional Plan, which is now under preparation, can be evaluated with respect to transportation, wastewater treatment and other service systems.

4-10

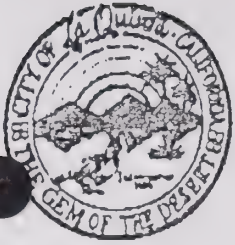
All mitigation measures associated with the proposed project should be monitored in accordance with AB 3180 requirements and reported to SCAG through the Annual Reasonable Further Progress Reports.

4-11

RESPONSES TO COMMENT LETTER NO. 4

Southern California Association of Governments

- 4-1 Comment noted.
- 4-2 A phasing analysis for the General Plan to be included in the Final EIR is a higher level of detail than is appropriate for a General Plan EIR. The majority of the development that is occurring in the Indio area is under the control of the County of Riverside and not the City. The Infrastructure Master Plan, which is an implementation measure, will better address phasing in the future.
- 4-3 Comment noted.
- 4-4 Comment noted.
- 4-5 Comment noted.
- 4-6 Section 3.3 of the Draft EIR specifically states that amount of solid waste to be generated with the proposed plan to be 395,840 tons per year.
- 4-7 Circulation Policy CIR-3.1 on page 3-29 in Section 3.2.3 in the Goals and Policies section of the General Plan states as follows: "Interface with appropriate jurisdictions and agencies to encourage the timely improvement of roadway and transit facilities which address areawide and regional travel needs".
- An implementation measure has been added to implement Circulation Policy CIR-3.1 to read as follows; "The City shall meet regularly with the Coachella Valley Association of Governments, the County of Riverside, Caltrans, and adjacent jurisdictions to identify regional roadway needs and potential problems and inconsistencies in future transportation plans."
- 4-8 Comment noted.
- 4-9 Comment noted.
- 4-10 Comment noted.
- 4-11 Comment noted.



City of La Quinta

78-493 CALLE TAMPICO -- LA QUINTA, CALIFORNIA 92253 - (319) 777-7000
FAX (319) 777-7101

5

September 16, 1993

Mr. Henry Hohenstein, AICP
Community Development Director
City of Indio
PO Drawer 1788
Indio, CA 92202

SUBJECT: CITY OF INDIO GENERAL PLAN 2020

Dear Mr. Hohenstein:

This letter serves as an addendum to the City of La Quinta's comments previously submitted on September 13, 1993. Some of the comments herein were addressed briefly in that letter.

Many of staff's concerns and questions have been addressed during the public hearings held to date on the General Plan. However, there are still some items of concern. These comments are provided in the spirit of cooperation and are intended to aid in refining the document and to identify any inconsistencies with the La Quinta General Plan.

SITE/DESIGN REQUIREMENTS:

Although many of the specific requirements incorporated in Indio Draft General Plan will be removed and placed in the revised Zoning Ordinance, as stated at the public hearings, it is recommended the level of detail in the General Plan be reduced as much as possible to allow a high degree of flexibility. Floor area ratios, minimum site and unit size requirements, height limits, etc., all serve to make the General Plan too rigid and difficult to implement and comply with. As a guidance document, a General Plan should give direction to those who use it. The amount of detail in the current draft will likely generate numerous amendment requests, and may well discourage potential quality projects from locating in the City of Indio.

GENERAL PLAN SUMMARY:

Table 3.1-1, Page 42

Under Housing, ensure that the SCAG household number of 16,254 is consistent with the socio-economic numbers generated with SCAG in March of this year for the Coachella Valley Area-wide Transportation Study (CVATS) model.

GOALS AND POLICIES REPORT:

Section 3.1.2, Page 3-11

In the example under RPD-3, a density based on proposed amenities is given. If this item is to remain in the General Plan the amenity criteria to be used in determining this figure should be set forth.



CIRCULATION:

1. There are some potential inconsistencies between the La Quinta planned circulation system and the proposed Indio General Plan. They are as follows:

<u>ROADWAY</u>	<u>LQ DESIGNATION</u>	<u>INDIO DESIGNATION</u>
48th Avenue	Collector (64-72' ROW)	Secondary (88' ROW)
Fred Waring	Major (120' ROW)	Augmented Major (134' ROW)
48th Avenue	Primary (110' ROW)	Augmented Major (134' ROW)
Jefferson St.	Major (120' ROW)	Arterial (110' ROW)
Highway 111	Major (172' ROW) ²	Augmented Major (134' ROW)

ROW = Right-of-Way

² = Caltrans requirements

These are major common roadways which either traverse both cities or border both corporate limits. Our concerns are with design consistency between the street section joins and the respective intersection designs. Additionally, the City of La Quinta has planned Jefferson Street as a six-lane facility.

2. Jefferson Street right-of-way should be upgraded south of 48th Avenue, allowing for a six-lane roadway to ensure adequate carrying capacity. This will be a major thoroughfare in the future and should be adequately planned for now. The current La Quinta General Plan description for Jefferson Street is a Major Arterial (120' right-of-way).
3. Madison Street north of 50th Avenue must be included in the Circulation Element. Staff concurs that the segment should be built either at the time of development in the area or when the need is otherwise demonstrated; the concern is that the need will eventually occur and that adequate provision is made in the General Plan to ensure that Madison Street can be extended when that need is shown. The La Quinta General Plan has rural roadway standards for arterials as part of the rural residential overlay designation. Madison Street is designated as an Agrarian Image Corridor in the Circulation Element, which requires equestrian trails and rural design themes. Enclosed is a copy of Policy 3-4.8.1 defining this designation. Madison Street is designated in the La Quinta General Plan as a Primary Arterial with right-of-way requirements of 110', with a 20' minimum landscaped setback from the right-of-way.
4. The Highway 111 right-of-way widths proposed in the Indio General Plan may not be acceptable to Caltrans. During the La Quinta General Plan process, Caltrans required 172' right-of-way along Highway 111.

Additionally, the La Quinta General Plan sets forth a minimum 30' landscaped setback from the right-of-way for Highway 111. While it is understood that Indio has certain existing conditions/constraints along its sections of the roadway, at a minimum the vacant land adjacent to La Quinta by Jefferson Street should provide the same setback for consistency. The landscape setback could then transition to the normal Indio setback on the east side of Jefferson Street.

8. Particular attention should be given to the intersection of Jefferson Street and Highway 111 as it relates the needs to be planned for transitional improvements so that Indio's standards can interlace with those of La Quinta.

PARKS AND RECREATION:

Page 8-83,
Figure 3.4-1. This figure is confusing, and does not appear to contain adequate information in the legend to explain how the colors indicate proximity to neighborhood parks. A distance should be provided for each color.

COMMUNITY DESIGN:

Page 3-71. Master wall plans for projects which border La Quinta and/or share common roadways with La Quinta should be coordinated with the City of La Quinta for design consistency with existing/proposed walls, and for reference when future walled developments are proposed.

Page 3-73. Item 29 should also consider direct, convenient pedestrian access from within the project to nearby shopping and transit.

4.3. CULTURAL RESOURCES:

The policies in this section are very good. A suggestion relative to Implementation Measure 3.0 on page 4-21 would be that the Historic Preservation Commission should follow State Historical Preservation Office guidelines concerning composition. Persons with specific professional expertise in archaeology and history should be on such a Commission.

HOUSING:

Page 6-3. The "Unimproved Land" section appears to be incomplete, with some wording missing.

(Additional comments relating to the Housing Element were forwarded in our September 13th letter.)

ENVIRONMENTAL SETTING REPORT:

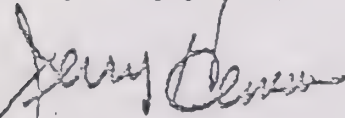
Page 4-23. The date of the reference to the La Quinta General Plan should be 1985 instead of 1988.

GENERAL:

1. There are a number of editorial errors, such as incomplete "Indio Facts" statements, missing text, etc., of which you are probably aware. Careful review to identify each of these is suggested to avoid problems after the document is adopted.
2. The City of La Quinta has adopted an Equestrian Overlay Zone District, which is generally west of Madison Street between 30th & 32nd Avenues (refer to attached zoning map section). Staff supports the designation of the Indio Ranchos area for equestrian and low density residential uses.
3. Staff feels that residential densities should be shown directly on the Land Use Diagram as part of the legend.
4. Regarding trails, it has been La Quinta's experience that CVWD will resist location of trail systems along their canal facilities/right-of-ways. It is suggested that any trail systems be coordinated with CVWD where those facilities may be involved. Also, La Quinta has trail systems delineated in a Park & Recreation Policy Diagram in the Parks & Recreation Element, which should be consulted in order to link common trail facilities.

Staff appreciates the opportunity to comment on the Indio General Plan. Should your staff or consultant team have any questions regarding these comments, please feel free to contact the Planning and Development Department at 777-7123. Thank you in advance for your attention to our concerns.

Very truly yours,



JERRY HERMAN
PLANNING & DEVELOPMENT DIRECTOR

JH:ccj

cc: City Council
Robert L. Hunt; City Manager
Saundra Juhola; City Clerk
Fred Baker; Principal Planner
Steve Speer; Assistant City Engineer

RESPONSES TO COMMENT LETTER NO. 5

City of La Quinta

The majority of the comment letter from the City of La Quinta relates to the General Plan and not specifically to the Draft EIR. There was one comment on the Environmental Setting Report which has been responded to below.

- 5-1 Comment noted the reference to the City of La Quinta General Plan has been corrected referencing the 1985 date.

SUSAN E. WILLIAMS, URBAN PLANNING
 81-133 Red Bluff Road
 Indio, CA 92201
 (619) 775-7041 or 775-6848

September 18, 1993

City Council
 City of Indio
 P.O. Drawer 1788
 Indio, CA 92202-88

Honorable Mayor and Members of the City Council:

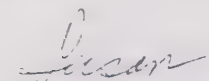
On behalf of Monroe Indio, Inc. (523 No. Bedford Drive, Beverly Hills, CA 90210) I am requesting that the 40 acre property located on the west side of Monroe Street, 600 feet north of Avenue 42 (Assessor's Parcel Number 605-200-001) owned by Monroe Indio, Inc. be redesignated to a General Plan category that allows for a maximum threshold density of 5 units per acre or greater. This is the density that we feel is necessary to build a standard single family subdivision with lots averaging 8,000 square feet.

In addition, we request that you delay action until the wording of the requirements for a Residential Planned Development and the process for accomplishing the approval of an RPD through developer initiated action is available for review by the public. This is an extremely critical issue to the implementation of your new General Plan and will affect the community for many years to come. Our desire is to assure the participation of all property owners in the process from inception of the planning concepts through the public hearing process. We do not wish to be excluded until the time that a public hearing occurs. We contend that it is illegal for another property owner to submit to you an application for General Plan Amendment or Change of Zone that includes our property without our signature as the legal property owner. If the first notice that the legal property owner receives is of a public hearing, then he has been granted no more rights than the neighbors within 300 feet of his property and has been robbed of his rights as a property owner. It is illegal for a buyer in escrow to submit to you an application without the legal owner's signature or authorization. How can it be legal for the city initiate a change with no notice to the property owner, have an adjacent developer prepare a specific plan, and give notice to the legal owner at the time for the public hearing. We understand that the City of Indio is diligently working on new wording and ask only that ample time for our review of the new wording be granted.

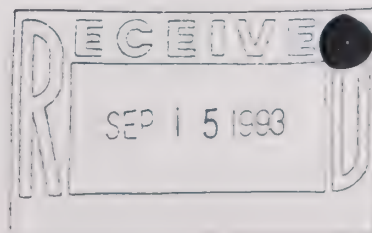
Drainage is a major issue in the Shadow Hills area, yet the subject is listed in the EIR as an unresolved issue. How could flood hazards be adequately estimated in the EIR with no data currently available in the Shadow Hills area. (See page 29 of the General Plan Summary).

6-1

Sincerely,



Susan E. Williams
 on behalf of David Home and Joseph Harris
 Monroe Indio, Inc.



RESPONSES TO COMMENT LETTER NO. 6

Susan E. Williams, Urban Planning

- 6-1 The purveyance of flood waters in the Shadow Hills area is a current unresolved issue in the City's Planning Area. Policy FH-1.1 "The City shall ensure that adequate flood protection is provided throughout the community" (page 5-27, Section 5.7 Flood Hazards, Goals & Policies Document) identifies the City need to provide and protect the community from flood hazards. Through the implementation of Measure No. 2.0 on page 5-27, "The City shall work with Coachella Valley Water District to identify regional flood hazards and develop a comprehensive Flood Control Master Plan for the region." The City is to develop a comprehensive master plan to mitigate flood hazards within the region. This implementation measure is to be carried out within 1 year of the adoption of the General Plan.

PART IV - ADDENDUM TO THE DRAFT ENVIRONMENTAL IMPACT REPORT

The following section contains a set of addendum pages to the Draft EIR. The changes in this section are the result of staff and public review, and are meant to provide clarification of the analyses and mitigations within the Draft EIR. The changes within this section were not found to be substantial changes to the Draft EIR by the lead agency, and therefore, no recirculation of the Draft EIR is warranted.

In the following section, headings describing the location of a change will be bolded and underlined (i.e., **Page 3-12, Section 1.2, 1st Paragraph**). Below this heading will be the changes to the identified location. Additions will be noted with a grey background (new addition), whereas deletions will be shown with a strikeout notation (~~deletion~~).

Goals and Policies Changes

Page 3-36, Section 3.2 Circulation Implementation Measures

In response to the concerns of the Southern California Association of Governments regarding Growth Control Management an implementation measure has been added to implement Circulation Policy CIR-3.1 to read as follows:

Implementation Measure

45.0 The City shall meet regularly with the Coachella Valley Association of Governments, the County of Riverside, Caltrans, and adjacent jurisdictions to identify regional roadway needs and potential problems and inconsistencies in future transportation plans.

Implements what policy?

CIR-3.1

Who is responsible?

Community Development Dept.

Timeframe

On-going

Environmental Impact Summary Changes

The following changes to the EIR Summary have resulted from changes to the Land Use Plan as a result of public input during the public hearing testimony on the Draft General Plan.

Page 30, Section 5.4.3, Paragraph 2

Sentence 5 shall read: With the proposed plan the buildout population is estimated at ~~174,356~~ 208,739.

Sentence 7 shall read: Dwelling units are estimated at ~~56,606~~ 67,121 with the proposed plan and 48,687 with the Moderate Density Alternative.

Table 5.1-1 Environmental Impact Summary

Changes to Table 5.1-1 Environmental Impact Summary are provided on the table. Changes are shown as shaded where as the old material has been lined-out.

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
LAND USE			
Population for 1992 in the Planning Area was 42,099. Existing land uses in the Planning Area consist of 2,925 acres of residential uses including 14,958 dwelling units, 739 acres of commercial, 399 acres of industrial, 823 acres of public, and 6,814 acres of open space (excluding unimproved lands and lands under construction). Existing agricultural and mining land uses consist of 6,506 acres.	<p><u>Direct Impacts</u></p> <p>Conversion from open space and agricultural land uses to residential, commercial, industrial, and recreational uses.</p> <p>Creation of land use conflicts with surrounding land uses.</p> <p>Loss of prime agricultural soils to urban uses.</p> <p>Increase in residential land uses to 12,747 14,787 acres and 56,060 67,121 dwelling units an increase in dwelling units of 374 449 percent.</p> <p>Increase in commercial land uses to 1,973 2,261 acres an increase of 249 306 percent.</p> <p>Increase in industrial land uses to 1,406 1,240 acres an increase of 352 311 percent.</p> <p>Increase in public land uses to 1,003 1,021 acres an increase of 122 124 percent.</p> <p>Increase in open space to 7,124 7,089 acres an increase of 104 104 percent.</p> <p>Increase of approximately 132,257 persons over a 27 year period.</p> <p><u>Indirect Impacts</u></p> <p>Indirect impacts to traffic, noise, air quality, increased demand on public services, infrastructure, and community services from population increases.</p>	Mitigation is provided in the Implementation Measures table in Section 3.1 in the Goals and Policies section of the General Plan document.	<p>Impacts to prime agricultural lands remain significant.</p> <p>Other impacts to land use are reduced to insignificant.</p>

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
CIRCULATION			
The majority of the Planning Area has yet to be developed especially north of I-10. Major roadways which extend south from I-10 are currently impacted by traffic generated within the City and from adjacent communities.	<p>At buildout of the proposed General Plan, the Planning Area land uses are estimated to generate 1,497,282 total trip-ends and total land uses within the traffic model extended study area 2,943,448 trip-ends.</p> <p>An overcrossing at Madison and I-10 and the East Valley Parkway will be required to facilitate growth north of I-10 in the Planning Area.</p> <p>Upgrades will be necessary to Madison Street, Jefferson Street, Monroe Street, Jackson Street, 50th Avenue, 48th Avenue, Highway 111, Miles Avenue, Fred Waring Drive, and Country Club Drive.</p>	Mitigation is provided in the Implementation Measures table in Section 3.2 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
INFRASTRUCTURE/PUBLIC SERVICES			
<p>Water is provided to the City by the CVWD.</p> <p>Sewer providers include the VSD and CVWD.</p> <p>The City's solid waste is deposited in the Coachella Landfill which is expected to reach capacity by the year 2014.</p> <p>The Imperial Irrigation District currently provides electricity to the City.</p> <p>SCG provides natural gas service on a demand basis.</p> <p>General Telephone (GTE) lines are located throughout the Planning Area and service is provided on a demand basis. Long distance telephone service is currently provided throughout the area.</p> <p>Colony Cablevision provides cable television services throughout the area and service lines are extended as development occurs.</p>	<p>Increased demand for domestic water, sewer service, flood and drainage control facilities.</p> <p>An increase in solid waste generated from 62,000 to 395,840 473,837 tons per year. Coachella Landfill is expected to reach capacity by the year 2014.</p>	<p>Mitigation is provided in the Implementation Measures table in Section 3.3 in the Goals and Policies section of the General Plan document.</p>	<p>Impacts are reduced to insignificant.</p>

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
COMMUNITY SERVICES			
<p>The Planning Area is serviced by both the Desert Sands Unified School District (DSUSD) and the Coachella Valley Unified School District (CVUSD). Continuing education opportunities are provided in the region at the COD, Chapman College, and National University, and California State University, San Bernardino (Satellite Campus).</p> <p>A broad range of health care services are available within the Planning Area, including private practice physicians, a full service medical facility, and two publicly funded health care clinics.</p> <p>The City of Indio and the Coachella Valley Recreation and Park District (CVRPD) are responsible for parks and recreation facilities. The City has a total of approximately 220 acres of recreational facilities within the City limits.</p> <p>The Max T. McCandless Library services the Planning Area and is a 20,000 square foot regional facility. This library is the largest in the Coachella Valley and one of only two reference libraries in Riverside County.</p>	<p>Increased need for an additional 16.5 19 elementary schools, 5 middle schools, and 3 high schools with a projected increase in the school age population of 23,727 25,507 students.</p> <p>Increased need for health care services and facilities and libraries.</p> <p>Buildout of the General Plan will create the need for 523 626 acres of parkland (3-acres per thousand population).</p>	<p>Mitigation is provided in the Implementation Measures table in Section 3.4 in the Goals and Policies section of the General Plan document.</p>	<p>Impacts are reduced to insignificant.</p>
COMMUNITY DESIGN			
<p>Currently the majority of the Planning Area is undeveloped.</p>	<p>Development of unimproved lands will significantly change the look and character of the community.</p>	<p>Mitigation is provided in the Implementation Measures table in Section 3.5 in the Goals and Policies section of the General Plan document.</p>	<p>Impacts are reduced to insignificant and are beneficial.</p>

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
ECONOMIC DEVELOPMENT			
Indio has traditionally been the economic center of the Eastern Coachella Valley. The economy in the Coachella Valley has remained concentrated in the retailing, services, agriculture, and lodging resort sectors.	The proposed General Plan will result in significant increases in tax revenues, from both property tax and sales tax, and revenues from citywide fees. The significant increase in property tax is attributed to both the increased land area under the City's control and the intensification of uses under the proposed General Plan. Additional revenues from fees will be created through additional development as a result of implementing the proposed plan. Job opportunities will also benefit the community economically through the jobs created by this project, including but not limited to employees of the planned industrial and commercial developments.	Mitigation is provided in the Implementation Measures table in Section 3.6 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
GOVERNMENT			
The City of Indio is governed by a Council-Manager style of government. The City has developed both procedures for fast tracking of development in the Enterprise Zone and implementation policies for CEQA.	Implementation of the proposed General Plan will increase the needs for a more organized governmental structure. The proposed General Plan attempts to standardize the governmental structure of the community resulting in a more organized government structure.	Mitigation is provided in the Implementation Measures table in Section 3.7 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
OPEN SPACE			
Currently open space uses, excluding unimproved and lands under construction, make up 6,814 acres or 26 percent of the Planning Area.	<p>Buildout of the proposed General Plan will increase open space acreages to 7,124 7,089 which represents 26 percent of the Planning Area.</p> <p>Introduction of urban land uses north of I-10 in areas designated as open space in the County of Riverside General Plan.</p>	Mitigation is provided in the Implementation Measures table in Section 4.1 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
SOILS			
The majority of the Planning Area is within a blowsand hazard area. (Fugitive Dust is analyzed in Air Quality.) Soils in the Planning Area consist of Myoma fine sand, Indio fine sand, Coachella fine sandy loam, and Indio very fine sand loam which are subject to erosion from wind and water.	<p>Implementation of the proposed General Plan will result in the loss of 6,577 acres of prime agricultural soils.</p> <p>Soils in the Planning Area are subject to erosion from wind and water.</p>	Mitigation is provided in the Implementation Measures table in Section 4.2 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
AGRICULTURE			
Existing agricultural uses consist of 6,030 acres or 22.7 percent of the Planning Area. These uses are located generally north of I-10 and in the fringes of the urban area of Indio.	Implementation of the proposed General Plan will result in the loss of 6,577 acres of prime agricultural soils.	Mitigation is provided in the Implementation Measures table in Section 4.3 in the Goals and Policies section of the General Plan document.	Impacts to prime agricultural lands remains significant.

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
WATER RESOURCES			
<p>Indio is underlain by the Thermal Subarea of the Coachella Valley Groundwater Basin. Overdraft of the groundwater basin is estimated to increase to 28,500 acre-feet per year by the year 2000.</p> <p>Reclaimed water is supplied from the Coachella Valley Water District wastewater treatment plant located at Avenue 38 and Madison Street. Reclaimed water is currently use on golf courses for irrigation and landscaped open areas.</p> <p>Domestic water service is supplied by the City's Public Works Department.</p> <p>Valley Sanitary District (VSD) treatment plant located on Van Buren Street uses settling ponds to recharge the aquifer.</p>	<p>Increased demand for groundwater resources, decreases in groundwater recharge from an increase in impervious surfaces.</p> <p>Increase in urban storm water runoff which may carry pollutants that may degrade water quality in the Planning Area.</p>	<p>Mitigation is provided in the Implementation Measures table in Section 4.4 in the Goals and Policies section of the General Plan document.</p>	<p>Impacts are reduced to insignificant.</p>

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
BIOLOGICAL RESOURCES			
<p>Areas of high biological sensitivity are located in areas north of the east side dike. The desert plant communities found in the Planning Area that are regarded as sensitive and possibly containing sensitive plant and wildlife species are stabilized dunes, Sonoran Desert Scrub, and fan palm oases.</p>	<p>Conversion of undeveloped lands and introduction of urban land uses north of Avenue 38 and the flood control levee north of I-10 will contribute to the devastation of sensitive wildlife habitat.</p> <p>Direct and indirect impacts on plants and wildlife through the elimination of suitable habitat by the conversion to more urban uses and development on adjacent plant and wildlife communities.</p> <p>Construction impacts to plant species resulting in increased siltation and erosion on adjacent waterways.</p> <p>Loss of agricultural lands may impact wildlife species which use these areas.</p> <p>Stabilized dune habitats will be affected through the introduction of urban land uses.</p>	<p>Mitigation is provided in the Implementation Measures table in Section 4.5 in the Goals and Policies section of the General Plan document.</p>	<p>Impacts are reduced to insignificant.</p>
ENERGY CONSERVATION			
<p>Title 24 of the State Building Code deals directly with energy conservation and is continuously updated and revised to require greater energy efficiency in the construction of new housing. The SCG offers repairs for appliances and implements a replacement and low-income weatherization program at no cost to qualified homeowners. Southern California Edison (SCE) offers a energy management hardware rebate program to its customers.</p>	<p>Increased energy consumption (natural gas, electricity) during land development, construction of projects, and at ultimate buildout.</p>	<p>Mitigation is provided in the Implementation Measures table in Section 4.6 in the Goals and Policies section of the General Plan document.</p>	<p>Impacts are reduced to insignificant.</p>

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
MINERAL RESOURCES			
The State has designated three areas within the Indio Hills as containing significant aggregate resources. Two of these areas are contained within the Planning Area. The only active aggregate operation within the Planning Area is the Granite Construction aggregate quarry which has recently obtained additional permits to continue mining over the next 20 years.	Potential impacts to existing mining operations from the siting of incompatible land uses in the vicinity of the mine.	Mitigation is provided in the Implementation Measures table in Section 4.7 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
CULTURAL RESOURCES			
Buried cultural resources may be present. There is the potential for paleontological resources.	<p>Potential impact to existing historic resources associated with mining and ranching.</p> <p>Potential loss of archaeological value through disturbance of historic and prehistoric sites in Planning Area.</p> <p>Construction operations within sedimentary rock formations have the potential to disturb and destroy significant paleontological resources.</p>	Mitigation is provided in the Implementation Measures table in Section 4.8 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
NOISE			
Noise sources in the Planning Area include natural sounds, manmade sounds from residences, aircraft overflight from the Bermuda Dunes and Thermal airports, the Southern Pacific Railroad and the freeway. The majority of the Planning Area remains outside the 70 dBA noise contour level.	<p>Potential short-term impacts may occur from construction activities.</p> <p>Increased traffic on area roadways will increase exposure of sensitive noise receptors to increased noise.</p> <p>Implementation of the proposed General Plan will expose additional populations to existing noise sources.</p>	Mitigation is provided in the Implementation Measures table in Section 5.1 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
AIR QUALITY			
The climate of the Coachella Valley is arid with rainfall averaging less than 3 inches per year. The Coachella Valley is subject to the overall southern California wind regimes which seasonally affect climate and air quality. Ozone and particulates (PM ₁₀) are the major air quality problems in the South East Desert Air Basin (SEDAB). In the Planning Area, the ozone standard is exceeded due to transport from the South Coast Air Basin and is not attributed to activities within the SEDAB. Fugitive dust or wind induced soil erosion is the greatest contributor of PM ₁₀ in the Coachella Valley	<p>Generation of fugitive dust and combustion emissions during construction of development.</p> <p>Generation of significant VOC emissions from structure coatings.</p> <p>Generation of air pollution from daily vehicle trips at project buildout.</p> <p>Secondary impacts will contribute to regional air quality impacts.</p>	Mitigation is provided in the Implementation Measures table in Section 5.2 in the Goals and Policies section of the General Plan document.	Impacts remain significant for NO ₂ , ROG, and PM ₁₀ . All other air emissions are reduced to adverse as they contribute to the regionally degraded air basin.
POLICE AND FIRE SERVICES			
<p>Police protection for the City is provided by the Indio Police Department. The police force personnel currently includes 52 sworn officers and 21 nonsworn employees.</p> <p>The Indio Fire Department provides fire protection and paramedic services to the City of Indio. The Department has three stations throughout the City. Response times are currently under 10 minutes.</p>	Increased population will increase the need for additional police and fire protection services and facilities.	Mitigation is provided in the Implementation Measures table in Section 5.3 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
EMERGENCY PREPAREDNESS			
The City currently implements a basic emergency planning and response program through a mutual aid system with the County of Riverside and surrounding communities.	Buildout within the Planning Area will place people and structures in areas subject to natural hazards that have the potential to create risks to life and property.	Mitigation is provided in the Implementation Measures table in Section 5.4 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.

Table 5.1-1

ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
HAZARDOUS MATERIALS			
The majority of hazardous materials problems that exist and will continue to exist in the Planning Area are transportation accidents on I-10, the railroad and streets within the City's jurisdiction, illegal dumping, underground storage tank leaks, leaking petroleum gas pipelines, commercial and industrial wastes, agricultural pesticides, and illegal drug laboratories.	Implementation of the proposed General Plan has the potential to expose humans to the common hazardous materials and hazardous waste problems similar to what currently exists in the Planning Area.	Mitigation is provided in the Implementation Measures table in Section 5.5 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
GEOLOGY AND SEISMICITY			
<p>The majority of the Planning Area lies at or below sea level, except the Indio Hills which rise to 1,350 feet above the surrounding area. The Indio Hills represent the most significant topographical feature in the area</p> <p>The San Andreas fault zone is located north of the east side dike and is considered the most active fault system in California. The majority of the Planning Area is subject to severe ground shaking and liquefaction.</p>	<p>Grading for infrastructure and structures in the Indio Hills may significantly impact topographical features of these hills and could expose human life and property to unstable soils.</p> <p>Implementation of the proposed General Plan will continue to expose people and structures to the effects of seismically induced hazards such as ground shaking, fault rupture, liquefaction, slope instability, and subsidence.</p>	Mitigation is provided in the Implementation Measures table in Section 5.6 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
FLOOD HAZARDS			
The CVSWC is the major purveyor of stormwater runoff in the Coachella Valley. Flooding in areas north of I-10 is due to culverts not having sufficient capacity to pass stormwater in an efficient manner. Other area subject to flooding include Avenue 45 at Van Buren Street, Highway 111 at Calhoun Street, and Avenues 47 and 48 between the CVSWC and the Southern Pacific railroad. The City does not have a comprehensive drainage system inventory or systematic maintenance program	<p>Implementation of the proposed General Plan will continue to expose people and structures to flood related hazards.</p> <p>Additional development will increase storm water runoff flowing into the CVSWC resulting in a greater demand on the existing storm drain system.</p>	Mitigation is provided in the Implementation Measures table in Section 5.7 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.

Table 5.1-1
ENVIRONMENTAL IMPACT SUMMARY

Existing Conditions	Issues and Impacts	Mitigations	Residual Impact
AIRPORTS			
There are two airports in the vicinity of the Planning Area, the Thermal Airport and the Bermuda Dunes Airport, neither are within the Planning Area.	<p>Potential conflict in land uses between the Bermuda Dunes Airport and those of the Planning Area.</p> <p>Exposure of people and structures to aircraft accidents and noise.</p>	Mitigation is provided in the Implementation Measures table in Section 5.8 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.
HOUSING			
Currently the Planning Area has 14,958 dwelling units within its jurisdiction.	Implementation of the proposed General Plan will increase the number of dwelling units from 14,958 to 56,060 67,121. SCAG estimates the number of households in Indio to be 16,254 in 2010. This estimate does not take into account the additional households outside the current cooperate limits.	Mitigation is provided in the Implementation Measures table in Section 6.0 in the Goals and Policies section of the General Plan document.	Impacts are reduced to insignificant.

Environmental Setting Report Changes

Page 4-26, Section 4.5, Table 4.5-1

Table 4.5-1 has been revised as requested by the City of La Quinta in changing the date of the referenced City of La Quinta General Plan from 1988 to 1985.

Environmental Impact Report Changes

Changes were made to the main body of the EIR to reflect changes made to the Land Use Plan as a result of the public hearing process on the Draft General Plan and staff editorial changes. These changes were not found to be substantial changes to the Draft EIR, and therefore, no recirculation of the Draft EIR is warranted.

Page 1-6, Section 1.5, Paragraph 3

Change spelling of Cahulla to Cahuilla.

Page 3-1, Section 3.1.2, Paragraph 3

Sentence 4 shall read: The maximum buildout population of the planning area is ~~174,356~~ 208,739 persons with the proposed plan.

Page 3-1, Section 3.1.2, Paragraph 5

Sentence 3 shall read: Buildout of the proposed plan will increase the amount of residential land uses by ~~436~~ 449 percent.

Sentence 4 shall read: The acres of residential land uses at buildout is ~~12,747~~ 14,787 or ~~50~~ 56 percent of the total planning area.

Sentence 5 shall read: The maximum number of dwelling units at buildout is ~~56,060~~ 67,121.

Page 3-1, Section 3.1.2, Paragraph 7

Sentence 3 shall read: It is anticipated that domestic water demand will increase from approximately 4.2 billion gallons per year (BGY) to ~~29.1~~ 22.9 BGY at buildout.

Page 3-2, Section 3.1.2, Paragraph 1

Sentence 4 shall read: Buildout of the plan will result in a total of ~~1,973~~ 2,261 acres of commercial land uses, or ~~7~~ 8.5 percent of the planning area, an increase of ~~249~~ 306 percent.

Page 3-2, Section 3.1.2, Paragraph 3

Sentence 4 shall read: Buildout of the proposed plan will allow for ~~1,406~~ 1,240 acres of industrial land uses, consisting of ~~5~~ 4.6 percent of the planning area, an increase of ~~352~~ 311 percent.

Page 3-2, Section 3.1.2, Paragraph 5

Sentence 2 shall read: Public and Quasi Public lands will increase ~~will~~ with implementation of the proposed plan to ~~1,003~~ 1,021 acres, 4 percent of the planning area, an increase of 122 percent.

Page 3-13, Section 3.3, Paragraph 1

Sentence 2 shall read: Buildout of the proposed plan will increase that number to ~~7,124~~ 7,089 or 27 26 percent of the planning area.

Page 3-13, Section 3.3, Paragraph 2

Sentence 1 shall read: Implementation of the proposed General Plan will increase the demand for sewer service from approximately 4.3 million gallons per day (MGD) to approximately ~~17.8~~ 20.8 MGD.

Page 3-13, Section 3.3.2, Paragraph 4

Add at the end of the paragraph: New developments will have to retain stormwater runoff onsite until such time master planned facilities are constructed.

Page 3-13, Section 3.3.2, Paragraph 5

Sentence 2 shall read: Implementation of the General Plan will increase the amount of solid waste to approximately ~~395,840~~ 473,838 (at 2.27 tons per person per year) tons per year.

Page 3-13, Section 3.3.2, Paragraph 6

Sentence 1 shall read: Implementation of the General Plan will result in an increased residential

demand for electricity from approximately 177.7 million kilowatt hours per year to ~~665.8~~ 408.2 million kilowatt hours per year at buildout.

Page 3-14, Section 3.3.2, Paragraph 2

Sentence 2 shall read: The residential demand for natural gas service will increase from approximately 7.6 million therms per year to approximately ~~34.9~~ 50.4 million therms per year.

Page 3-14, Section 3.3.2, Paragraph 4

Sentence 2 shall read: According to standards set forth in Section 3.4 of the goals and policies portion of the General Plan document, buildout of the General Plan will create the need for 3 acres per thousand population or ~~523~~ 626 acres of parkland.

Page 3-14, Section 3.3.2, Paragraph 5

Sentence 1 shall read: Buildout of the proposed General Plan will require ~~87,178~~ 104,370 square feet of library facilities and ~~299,227~~ 250,487 volumes, according to current Riverside County library standards.

Page 3-15, Section 3.4.2, Paragraph 2

Sentence 1 shall read: At buildout, with a total population of ~~174,356~~ 208,739, the school age population in the planning area is estimated to be approximately ~~22,727~~ 25,507.

Sentence 2 shall read: Assuming the current distribution, there will be ~~12,391~~ 17,452 (at 26 students per dwelling unit) elementary schools students, ~~5,668~~ 3,356 (at 05 students per dwelling unit) middle school students, and ~~5,668~~ 4,699 (at 07 students per dwelling unit) high school students.

Sentence 3 shall read: The estimated school age population will necessitate an additional ~~16.5~~ 19 elementary schools (at 750 students per school), ~~5~~ 2.8 middle schools (at 1,200 students per school), and ~~3~~ 2.2 high schools (at 2,100 students per school).

Page 4-1 Section 4.1.2, Paragraph 2

Sentence 1 shall read: Buildout of the proposed General Plan will increase open space acreages to

~~7,124~~ 7,089 which represents 26 percent of the Planning Area.

Page 5-9, Section 5.3.2, Paragraph 1

Sentence 2 shall read: It is estimated an additional ~~255~~ 313 police (based on the City's desired ratio of 1.5 officers per 1,000 residents) and ~~183~~ 208 fire (based on one full-time fireman per 1,000 residents) personnel will be required.

Page 6-1, Section 6.2, Paragraph 1

Sentence 1 shall read: Implementation of the proposed General Plan will result in an increase in dwelling units from the existing number of units in the Planning Area from ~~14,958~~ to the anticipated amount at buildout ~~56,060~~ 67,121, an increase of ~~41,102~~ 52,163 units or ~~375~~ 449 percent.

Page 8-3, Section 8.1, Paragraph 1

Sentence 3 shall read: The highest residential designation in the proposed plan is ~~12~~ 20 dwelling units per acre.

Page 8-4, Section 8.1.1, Paragraph 4

Sentence 2 shall read: The proposed plan provides a ~~249~~ 306 percent increase in commercial and ~~352~~ 311 percent increase in industrial land uses.

Page 8-8, Section 8.2.1, Paragraph 3

Sentence 1 shall read: Impacts to infrastructure such as water and wastewater will be slightly less with the Lower Density Alternative than with the proposed plan because of population decrease of ~~94,168~~ 128,551 people.

Page 8-8, Section 8.2.1, Paragraph 4

Sentence 4 shall read: The need for additional acreage for parks will decrease from an estimated ~~523~~ 626 acres with the proposed plan to 281 acres with this alternative.

Page 8-12, Section 8.2.1, Paragraph 2

Sentence 2 shall read: An anticipated ~~264~~ 313 police officers will be required with the

implementation of the proposed plan and 120 with this alternative.

Page 8-2, Section 8.8, Table 8-1.1

Table 8-1.1 has been revised under the issue area for housing to include a revision requested by the State of California Department of Housing and Community Development which changes "Similar" to "More" under the Low Density Alternative for Housing.

Page 8-7, Section 8.2.2 Environmental Impacts for the Low Density Alternative

The discussion relating to the impacts of the Low Density Alternative has been revised to reflect the concern expressed by the State of California Department of Housing and Community Development regarding impacts to housing within the Planning Area.

- ▶ Housing - Implementation of this alternative will result in an increase in dwelling units over the current plan similar to that of the proposed plan (56,060 with the proposed plan and 25,784 with the Low Density Alternative). As with the proposed plan, this alternative proposes a more even distribution of residential densities throughout the Planning Area. The densities proposed with this alternative are less than with the proposed plan. This alternative would result in similar impacts to housing; may result in negative impacts to housing affordability due to the relationship of lower housing densities and land costs. *Level of impact as compared to the proposed plan: Similar More*

Page 8-12, Section 8.2.1, Paragraph 8

Sentence 1 shall read: Implementation of this alternative will result in an increase in dwelling units similar to that of the proposed plan (56,060 67,121 with the proposed plan and 25,784 with the Low Density Alternative).

Page 8-13, Section 8.3.1, Paragraph 3

Sentence 3 shall read: With the proposed plan the buildout population is estimated at ~~174,356~~ 208,739.

Sentence 5 shall read: Dwelling units are estimated at ~~56,060 67,121~~ with the proposed plan and 46,720 with the Moderate Density Alternative.

Page 8-13, Section 8.3.1, Paragraph 7

Sentence 2 shall read: Alternative than with the proposed plan because of population decrease of ~~29,052~~ 63,435 people.

Page 8-13, Section 8.3.1, Paragraph 9

Sentence 3 shall read: The need for additional acreage for parks will decrease also from an estimated ~~523~~ 626 acres with the proposed plan to 436 acres with this alternative.

Page 8-17, Section 8.3.1, Paragraph 7

Sentence 2 shall read: An anticipated-~~264~~ 313 police officers will be required with the implementation of the proposed plan and 218 with this alternative.

Page 8-18, Section 8.3.1, Paragraph

Sentence 1 shall read: Implementation of this alternative will result in an increase in dwelling units similar to that of the proposed plan (~~56,060 67,121~~ with the proposed plan and 46,720 with the Moderate Density Alternative).

Page 8-24, Section 8.4.1, Paragraph 4

Sentence 2 shall read: An anticipated-~~264~~ 313 police officers will be required with the implementation of the proposed plan and 365 with this alternative.

Page 8-25 Section 8.4.1, Paragraph 2

Sentence 1 shall read: Implementation of this alternative will result in an increase in dwelling units greater to that of the proposed plan (~~56,060 67,121~~ with the proposed plan and 78,437 with the High Density Alternative).

INDIO GENERAL PLAN
DRAFT ENVIRONMENTAL IMPACT REPORT
State Clearinghouse No. 93042057



Prepared by:

CHAMBERS GROUP, INC.

July 26, 1993

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INTRODUCTION

1.1 PURPOSE AND USE OF EIR

The purpose of this Program Environmental Impact Report (EIR) is to provide citizens, agency, and public officials a means to analyze the environmental impacts associated with implementing the proposed City of Indio Draft General Plan.

State of California Public Resources Code Sections 2100 *et seq.* require a governmental agency prepare an environmental document assessing the impacts of adopting, updating, or amending a general or master plan. The purpose of the EIR is to identify any significant environmental impacts associated with the implementation of the proposed General Plan, and to recommend mitigations that would either:

- ▶ Reduce the significant impacts to a level of insignificance.
- ▶ Mitigate the General Plan in order to avoid significant impacts.

A General Plan EIR is intended to examine the environmental impacts that result from the buildout on the community and also the cumulative effects on the surrounding area. The proposed General Plan was designed so that the implementation measures contained in the goals and policies portion of the General Plan mitigate significant environmental impacts that may result from implementing the plan. As most environmental impacts could be mitigated to a level insignificant, the proposed plan impacts on air quality and agricultural lands will remain significant.

1.2 IDENTIFICATION OF ISSUES TO BE ADDRESSED

According to Government Code Section 15060(c) and 15063(a) of the California Environmental Quality Act (CEQA), if a lead agency, the City of Indio, determines that an EIR will clearly be required for a project (the General Plan update), the agency may skip further initial review of the project and begin work directly on the EIR process. As CEQA suggests the City reviewed the environmental checklist form to ensure that all environmental issue areas are addressed in the EIR.

A Notice of Preparation (NOP) was prepared by the City and circulated to a range of agencies that have jurisdiction or discretionary powers over various aspects of the project. These agencies were requested to review the NOP, and provide the City of Indio with a letter outlining their concerns with the proposed project. The comment period ran from April 12, 1993 through May 10, 1992. A copy of the NOP, a list of the agencies and persons contacted, and the responses received is included in Appendix G of this EIR.

As stated above, prior to proceeding with the preparation of this EIR, the City of Indio reviewed the environmental checklist and prepared a NOP, that was designed to both determine the need for this EIR as well as specify the scope of this document.

This scope helped define the resource areas evaluated in the EIR to include the following:

- ▶ Earth Resources
- ▶ Air Quality
- ▶ Hydrology
- ▶ Water Supply and Quality
- ▶ Biological Resources
- ▶ Noise
- ▶ Transportation/Circulation
- ▶ Land Use
- ▶ Population
- ▶ Housing
- ▶ Public Services and Utilities
- ▶ Aesthetics, Light and Glare
- ▶ Recreation
- ▶ Cultural Resources

To simplify the organization of this EIR, this portion of the General Plan was organized in the same

manner as the Environmental Setting Report (ESR) and Goals and Policies portions of the General Plan document. For instance, geology was assessed in Section 5.6, soils in Section 4.2, and mineral resources in Section 4.7, in the ESR, goals and policies portion, and the EIR. This EIR is unique in that the elements of the proposed General Plan (the community development, environmental, public health and safety, and housing elements) are each analyzed for their impacts on the environment. In the case of public health and safety, impacts from health and safety issues such as seismicity and hazardous materials were analyzed for impacts on population and property that will result from implementation of the proposed plan.

In order to determine if a significant adverse impact would exist, a set of significance criteria were created for each of the resources. These criteria make it easy for the reader to understand the logic of determining significance as well as assist the analysts in their determinations. With these criteria available, a series of field evaluations, modeling and analytical techniques were completed in order to determine the possible effects of the proposed plan.

A range of environmental issues were examined in accordance with the requirements of CEQA to determine if significant environmental impacts are likely to occur from implementation of the proposed plan. When an issue was identified where potential significant impacts could occur, it is examined further in the EIR. With some issues, a determination could be made from the information available that significant environmental impacts would not occur and would not require further examination. In some cases, mitigation measures are added to further reduce potential adverse but not significant impacts.

In addition, the EIR also contains all of the sections required by CEQA. Table 1.2-1 contains a listing of all of the sections required by CEQA along with a reference to the section and page number where these items can be found in this document.

Table 1.2-1
REQUIRED EIR CONTENTS

Required Section (CEQA)	Section in the General Plan*	Page Number
Table of Contents (Section 15122)	EIR	i
Summary (Section 15123)	EIR ES	ES-1 in EIR
Introduction	EIR 1	1-1 in EIR
Project Description (Section 15124)	EIR 2	1-1 in EIR
Significant Environmental Effects of Proposed Project (Section 15126a); Environmental Impacts	ESR 3.1-6.1 By Element	Var. in ESR
Unavoidable Significant Environmental Effects (Section 15126b)	EIR 3.1-6.1 By Element	Var. in EIR
Mitigation Measures (Section 15126c)	Goals and Policies 3.1-6.1 By Element	Var. in Implementation Tables
Mitigation Monitoring Plan (Public Resources Code Section 21081.6)	Goals and Policies 3.1-6.1 By Element	Var. in Implementation Tables
Cumulative Impacts (Section 15130)	EIR 7	7-1
Alternatives to the Proposed Action (Section 15126d)	EIR 8	8-1
Growth Inducing Impacts (Section 15126g)	EIR 9	9-1
Local Short-Term Uses Versus Long-Term Productivity (Section 15126e)	EIR 9	9-1
Irreversible Environmental Changes (Section 15126f)	EIR 9	9-1
Effects Found Not to be Significant (Section 15128)	EIR 3.1-6.1 By Element	Var. in EIR
Organizations and Persons Consulted (Section 15129)		

Note: *Var.* indicates text is found under specific subheadings on various pages.

*** Sections required to be addressed per CEQA are found in various documents of the General Plan.**

ESR = Environmental Setting Report

EIR = Environmental Impact Report

INTRODUCTION

1.3 EIR FORMAT AND ORGANIZATION

According to the State Environmental Quality Act Guidelines Section 15166, if the general plan addresses all required sections of an EIR than a separate EIR is not needed as long as the document contains a cover sheet or separate section indicating where in the general plan each CEQA requirement is found. This EIR has been prepared as part of the General Plan document and is not intended to be a separate "stand alone" document. As indicated on Table 1.2-1 all areas required to be in an EIR are contained within various portions of the General Plan document. The EIR portion of the General Plan discusses the impacts of implementing the proposed plan.

The EIR is made up of nine sections that describe the proposed plan, analyze the environmental impacts that are related to implementation of the proposed General Plan, and propose a set of project mitigations that are associated with the impacts identified. The following paragraphs detail the content of each section within the EIR.

Section ES contains the *Project Summaries* for the EIR. The Project or Executive Summary for the EIR is contained within the summary section of the General Plan document which also contains the summary for each document contained within the General Plan. The EIR summary includes an overview of the proposed project and a summary of the impacts and associated mitigation measures. This section concludes with a summary of the project alternatives.

The Section 1 of the EIR is the *Introduction*. This portion of the report discusses general issues regarding the purpose of this document, the scope of the analysis that was conducted, and the format and availability of the EIR.

Section 2 covers the *Project Description*. This section is used to put the environmental analysis in perspective for the reader. Included is a discussion of the project's environmental setting, a description of the land uses and activities that are being proposed, and the actions that this EIR supports.

Sections 3 through 6 of this document contains the *Environmental Impact Analysis* that was performed

for this project. For each of the General Plan Elements identified in Section 2.2, the environment, impact assessment methodology, impacts identified, proposed mitigation and the significant unavoidable adverse impacts are detailed. The environmental setting of each area discussed is referred back to the appropriate section of the ESR. Mitigation for identified impacts are referred back to the Implementation Measures for the Policies of each General Plan Element analyzed. The Implementation Measures are presented in table form, identifying which City agency is responsible for implementation and when.

Section 7 discusses the *Cumulative Impacts* that are associated with the proposed General Plan in combination with other projects in the area surrounding the proposed project.

As required by the CEQA, Section 8 includes an analysis of potential *Alternatives to the Proposed Project*. Included in this section is an analysis of the "no action alternative" as well as the other alternatives to the proposed General Plan that were presented in the December 1992 Alternatives Report (AR). The alternatives to the Land Use Plan contained within the AR were presented to and reviewed by the City of Indio Planning Commission and City Council, and the general public. The preferred land use alternative is the proposed plan that has been analyzed for its impacts on the environment in this EIR.

Section 9 covers several items that are required elements of an EIR. These elements deal with the *Long-Term Implications of the Proposed Project*, including the growth inducing impacts of the proposed project.

The *Report Preparation Resources* that were used in the EIR are listed in the resources section of the General Plan document.

1.4 AVAILABILITY OF THE DRAFT EIR FOR THE CITY OF INDIO GENERAL PLAN UPDATE

The Draft EIR for the Indio General Plan is being distributed directly to numerous public agencies and interested persons for comment during the formal Draft General Plan review period. These documents are also available to the public for review at the following locations during the review period:

City of Indio
Community Development Department
100 Civic Center Drive
Indio, CA 92201
(619) 342-6500

Max T. McCandless Library
200 Civic Center Mall
Indio, CA 92201
(619) 347-2383

The City Planning Commission will receive public input on the project at a hearing before making a recommendation to the City Council on whether to approve the General Plan. Public comment is encouraged at all project public hearings before the Planning Commission and City Council. Information concerning the General Plan and EIR public review schedule and Planning Commission/City Council agendas can be obtained by calling the City of Indio Community Development Department at (619) 342-6500.

1.5 INTENDED USE OF THE GENERAL PLAN AND EIR

The EIR was prepared as a Program EIR to enable the City of Indio to examine the overall effects of carrying out the proposed General Plan and select a course of action to avoid unnecessary adverse environmental impacts. The Program EIR requires the City to examine individual projects or activities within the program or General Plan, at the time they are proposed, to determine whether implementation of these programs have been fully analyzed in the Program EIR. If projects or programs have no effects beyond those analyzed in the Program EIR, then no further CEQA documents are necessary. This approach allows the City to reduce its costs relative to CEQA compliance and still maintain high levels of environmental protection in the community.

The City of Indio General Plan and EIR will be used by the City of Indio Planning Commission and City Council in reviewing development proposals within the City and regulations and programs that will implement the goals and policies contained within the General Plan. The documents will also be used by other public agencies which must make discretionary actions relative to the development proposals relating to the General Plan, such as the granting of discretionary permits or entitlements.

Other agencies that are expected to review and utilize the General Plan and EIR are as follows:

- ▶ Cahulla Mission Band of Indians
- ▶ California Air Resources Board
- ▶ California Department of Food and Agriculture
- ▶ California Department of Transportation (Districts 8 and 11)
- ▶ California Department of Water Resources
- ▶ California Office of Planning and Research (OPR)
- ▶ City of Coachella
- ▶ City of La Quinta
- ▶ Coachella Valley Water Conservancy
- ▶ Coachella Valley Archaeological Society
- ▶ Coachella Valley Association of Governments (CVAG)
- ▶ Coachella Valley Water District (CVWD)
- ▶ Colony Cablevision
- ▶ Colorado River Water Resources Board
- ▶ County of Riverside
- ▶ General Telephone and Electric Company (GTE)
- ▶ Desert Water Agency (DWA)
- ▶ Imperial Irrigation District
- ▶ Imperial Water District
- ▶ Indio Redevelopment Agency
- ▶ JFK Hospital
- ▶ Local Agency Formation Committee (LAFCO)
- ▶ Riverside County Airport Commission
- ▶ Southern California Association of Governments (SCAG)
- ▶ Southern California Edison (SCE)
- ▶ South Coast Air Quality Management District (SCAQMD)
- ▶ Southern California Gas Company (SCG)
- ▶ Sunline Transit
- ▶ University of California, Riverside - Archaeological Research Unit
- ▶ Valley Sanitary District (VSD)
- ▶ Waste Management of the Desert, Inc.

PROJECT DESCRIPTION

This section provides information on the regional and local context of the proposed project (proposed General Plan) and a detailed description of the planning area and surrounding areas. Additionally, specific characteristics of the project are introduced.

2.1 REGIONAL AND LOCAL SETTING

The City of Indio is located in Riverside County, approximately 120 miles directly east of Los Angeles and 15 miles east of Palm Springs. Indio is located in the eastern portion of the Coachella Valley; adjacent jurisdictions include the City of La Quinta to the west, an unincorporated area of Riverside County to the south, east, west, and north, and the City of Coachella to the east (see Figure 1.3-1 in the Summary). The 1992 population for the city of Indio was 40,378.

2.2 PROJECT SETTING

2.2.1 Project Site

The Planning Area for the General Plan contains the existing city limits, the city's current sphere-of-influence, and additional unincorporated lands having a direct impact and physical link to the city. The total Planning Area covers approximately 41.5 square miles as shown.

The Planning Area is comprised of an polygonal shaped area bounded on the north by the Indio Hills and on the south by Avenue 52. Interstate 10, the primary transportation route through the valley bisects the Planning Area, as does Highway 111, the major commercial corridor. The Coachella Valley Stormwater Channel (CVSWC) traverses the planning area through the middle. The East Side

Levee transects the northern section of the planning area adjacent to the Indio Hills.

The topography of the site is relatively flat throughout the Planning Area with gently sloping to steep terrain in the northern portions of the site, characterized by the Indio Hills.

2.2.2 Surrounding Areas

The Planning Area is surrounded by the City of La Quinta to the west and south, unincorporated county lands directly to the south, north, east, and west, and the City of Coachella to the south and east.

Surrounding land uses include the unimproved Indio Hills to the north of the Planning Area, unimproved and agricultural lands to the northwest, residential development to the southwest, and agricultural and scattered residential development to the east.

2.3 PROJECT CHARACTERISTICS AND OBJECTIVES

The current Indio General Plan was adopted in 1978. The General Plan adopted at that time was a multi-tiered land use plan, consisting of a land use map and a policy plan. The policy plan is a lengthy document which covers all of the state-mandated general plan elements, along with some localized attention areas. It has become dated because of population growth and physical expansion of the City, changes in the desired direction for the City's future, and new requirements for general plan elements by the State of California. These changes have resulted in the city of Indio determining that a General Plan Update was necessary.

PROJECT DESCRIPTION

The objectives of this project include:

- ▶ Expanding the Planning Area to include lands outside the current corporate limits of the City of Indio that will directly impact the future of Indio.
- ▶ Prepare a database of the economic, physical, social, and natural environmental information about the Planning Area.
- ▶ Obtain input from those living, working, or owning property in the Planning Area to determine the issues and opportunities they see today and in Indio's future.
- ▶ Establishing community goals and policies to address the changing needs of the community.
- ▶ Providing the City with a comprehensive, internally consistent plan that conforms with all applicable laws, including the California General Plan Guidelines, the Public Resources Code, and the CEQA.

The general plan update process is comprised of four basic documents described below.

The first is the ESR. This document provides the environmental background data used in the General Plan. The purpose of this report is to provide a "picture in time" of how Indio was the General Plan was prepared. This report is referred to in the EIR for existing conditions information.

The second part of the General Plan process is the assessment of the opportunities and challenges in the planning area, as well as a review of the issues that are of concern to those living, working, and owning property in the city.

The third step is the AR. This report presented several general land use and policy alternatives that were based on previous planning inputs as well as continuing public workshops. The primary purpose of this report is to give the City Council, Planning Commission, and interested members of the public a status report on the findings and work in progress on the General Plan. The alternatives analysis in Section 8 of this EIR is based on the alternatives presented in the AR.

The fourth and final step is the preparation of the General Plan and Program EIR. The General Plan contains a compilation of the goals, policies, and implementation measures identified and refined throughout all four steps of this process. The General Plan EIR evaluates the environmental impacts, positive and negative, that will be associated with the implementation of the new General Plan. This document will present decision makers with a full understanding of the implications of the General Plan on the City's future. Upon adoption, the General Plan will be used to guide the physical development within the planning area through the year 2010.

The General Plan Update is comprehensive, long-term, and internally consistent. As mandated by state law, the General Plan includes all seven mandated elements: land use, housing, circulation, open space, conservation, noise, and safety. As allowed by state law, the seven mandated elements have been consolidated into the following four elements to allow for ease of use and the maintenance of the plan's currency.

- ▶ **Community Development Element.** This element covers land use, circulation, infrastructure, public services, community services, community design, government, and economic development. This element includes the state mandated land use and circulation elements.
- ▶ **Environmental Resources Element.** This element covers open space, soils, water resources, biology, energy conservation, mineral resources and cultural resources. This element includes the state required conservation and open space elements.
- ▶ **Public Health and Safety Element.** This element covers noise, air quality, emergency services, hazardous materials, geology/seismicity, flood hazards and airports. This element includes the noise and safety elements required by the state, and also includes an air quality subelement as required by the 1989 Air Quality Management Plan (AQMP).
- ▶ **Housing Element.** This element covers housing within the Planning Area. Although this element is directly tied to the issues covered in

the Community Development Element, the State Office of Planning and Research consolidation guidelines do not recommend its consolidation with other elements. The Housing element is recommended to stand on its own because of the necessity for period update and required state review process. This is a mandated required element.

COMMUNITY DEVELOPMENT

3.1 LAND USE

The environmental setting for land use is discussed in Section 3.1 of the ESR of the General Plan document.

3.1.1 Criteria for Determining Significance

Impacts to land use will be considered significant if one or more of the following situations arise:

- ▶ Conflicts with existing adopted plans of the community.
- ▶ Substantial conflicts with existing adjacent land uses.

3.1.2 Environmental Impacts

The proposed City of Indio General Plan sets forth the community's future through a series of goals, policies, and implementation measures. The proposed General Plan Land Use Diagram depicts the future land use designations that will shape future development in the community.

The discussion of impacts resulting from implementation of the proposed General Plan investigates the impacts associated with buildout of the proposed General Plan. Buildout is defined as the point at which all proposed land uses under the general plan have been implemented, this point can only be estimated in time and may never actually take place. The proposed plan is a 27-year plan, however, buildout of the plan may take considerably longer and is difficult to predict.

The population for Indio in 1990 according to the U.S. Census was 36,793. However, the planning area for the purposes of the general plan includes a

much greater area than the city limits and includes its sphere of influence which is currently under Riverside County's jurisdiction and will allow for a greater level of detail in planning as it relates to Indio. The population of the planning area in 1992 was 42,099. The maximum buildout population of the planning area is 174,356 persons with the proposed plan.

Impacts caused by implementation of the proposed general plan are discussed on the following pages and are isolated by land use category.

Residential

Existing land uses in the Planning Area consist of 2,925 acres of residential uses, including 14,958 dwelling units. Residential uses make up approximately 11 percent of the total planning area. Buildout of the proposed plan will increase the amount of residential uses by 436 percent. The acres of residential land uses at buildout is 12,747 or 50 percent of the total planning area. The maximum number of dwelling units at buildout is 56,060. Substantial increases in all residential land use categories will take place. The increase in residential uses is expected to occur mostly on land that is currently unimproved or used for agricultural production.

The proposed plan includes two new designations: Country Estates and Equestrian Estates. The Country Estates designation allows for the development of very low density residential uses in a rural atmosphere, no equestrian uses are allowed in this designation. The Equestrian Estates allows for the same type of low density residential environment centered around an equestrian lifestyle. The differentiation between these two designations will have a positive impact on the populations they are intended to serve by encouraging communities to reside there without the negative impacts perceived by those who do not choose the same lifestyle.

Commercial

Existing commercial land uses in the Planning Area consist of 793 acres. Currently only 2.4 percent of the land in the Planning Area is classified as commercial. Implementation of the proposed plan will dramatically increase the number of acres of commercial land uses. Buildout of the plan will result in a total of 1,973 acres of commercial land uses, or 7 percent of the planning area, an increase of 249 percent.

Changes in commercial designations between the previous plan and the proposed plan include the addition of three new commercial designations. Commercial Office, Community Commercial, and Downtown Commerce to further differentiate the type of commercial development desired in certain areas of the community. Community Commercial is more compatible with residential uses and provides the basic needs of the immediate neighborhoods it is intended to serve. The increased differentiation in commercial uses will help the community to better define its commercial needs and decrease impacts on adjacent uses.

Industrial

Currently 399 acres of industrial uses are located within the planning area and make up 1.5 percent of the total land area in the planning area. Industrial uses will increase with implementation of the proposed plan, mostly through development of vacant and agricultural lands. Buildout of the proposed plan will allow for 1,406 acres of industrial land uses, consisting of 5 percent of the planning area, an increase of 352 percent.

The industrial land use designations have been restructured in the proposed plan and the Business Park designation has been added. The Business Park designation allows for the development of professional office centers within a master planned development and creates an ideal low intensity buffer between higher intensity industrial uses and nonindustrial uses. The Industrial Park designation allows for the development of industrial centers within a master planned development. Heavy industrial use will occur within the Manufacturing designation.

Public

Existing lands in the planning area used for public land use account for 823 acres, 3.1 percent of the total land area. Public and Quasi-Public lands will increase with implementation of the proposed plan to 1,003 acres, 4 percent of the planning area, an increase of 122 percent.

Changes in the proposed general plan include a broadening of designations to include other public and quasi-public uses. Parks are discussed in the proposed plan under Open Space. Public lands are now designated as Public, Public Schools, and Quasi-Public uses. The new Quasi-Public designation allows for the designation of public utility lines or substations, pipelines, canals, and other infrastructure and supports type uses.

Open Space

Currently open space uses, excluding unimproved and lands under construction, make up 6,814 acres or 26 percent of the planning area. Buildout of the proposed plan will increase that number to 7,124 acres, 27 percent of the planning area. This increase is actually more significant considering, under the current plan, agricultural uses are considered open space. The Proposed Plan does not designate agricultural land uses or include agricultural lands in its open space designation. Therefore, increases in other publicly usable open space categories have increased greatly. The open space categories for existing land uses consists of community and regional parks, golf courses, agricultural and mining uses, unimproved land, and areas currently under construction at the time of the survey.

The development of parks and recreational uses will generally occur in the unimproved portions of the community, especially in the Shadow Hills area in conjunction with residential development.

These lands make up a vast majority, 82.0 percent of the entire planning area. Existing agricultural and mining uses consist of 6,506 acres or 24.5 percent of the planning area. These uses are located in the outlying areas of the community surrounding the core area. Mining uses will be allowed in the proposed Resource Recovery designation located in the northern portion of the Shadow Hills area.

The open space category is a completely new designation contained in the proposed plan and consists of Golf Course, Open Space, Parks and Recreation, and Resource Recovery. The designation of these open space uses gives the community greater control over their development and preservation. The Resource Recovery designation allows for mining of mineral resources and processing of mineral resources mined onsite. This use will still require an approved conditional use permit at the city's discretion. The designation of Resource Recovery areas restricts their use in other areas. The only area designated for Resource Recovery is located at the northern portion of the planning area in the Shadow Hills area, away from urban development.

Agricultural

Impacts to agricultural land uses are discussed in the Environmental Resources Section of the EIR portion of the General Plan document under Section 4.3.

Specific Plan

The Specific Plan designation is another designation designed to recognize and provide flexibility for approved specific plans in the planning area. This designation will allow the approved specific plan to act as the general plan and zoning for the property. Under buildout of the proposed plan 2,178 acres of mixed use land use will exist within the planning area and will account for 8 percent of the total planning area.

Village Core

Village Core is a designation which includes a mix of medium and high density residential with neighborhood commercial in a pedestrian oriented setting. This designation is used in the Shadow Hills area to provide a focus for the community and a higher level of services than would normally be provided at the community level to increase convenience and reduce the amount of vehicular trips. Buildout of the proposed plan will allow for 90 acres of Village Core use and will consist of 0.3 percent of the planning area.

Overlay Zones

Implementation of the proposed General Plan will introduce the use of two types of overlay zones as proposed in the goals and policies portion of the General Plan document. The two types of overlays proposed are Planned Development Overlays and Specific use overlays.

The Planned Development Overlays are designed to encourage the development of certain amenities through a comprehensive master plan by allowing enhanced densities. The three types of Planned Development Overlays are Commercial Planned Development, Manufacturing Planned Development, and Residential Planned Development.

Specific Use Overlays are intended to encourage uses that may not otherwise be allowed in a given land use designation. The two types of Specific Use Overlays are Mobile Homes Overlay and Medical Services Overlay.

The Overlay Zones will have an impact on land use by increasing densities allowed through the proposed land use densities and providing amenities and land uses that are seen as beneficial to the community.

Land Use Compatibility

The proposed General Plan Land Use Diagram was evaluated for compatibility with surrounding planned land uses by analyzing the General Plans of adjacent communities including La Quinta, Coachella, and the County of Riverside. The proposed land use plan was found to be compatible with the planned land uses of the La Quinta and Coachella. The County of Riverside plan designates much of the land adjacent to Shadow Hills area as agriculture and desert areas. The majority of the lands bordering the county lands in Shadow Hills are designated for open space uses. The northwest portion of the planning area is designated for specific plan and residential medium uses and border county land designated for biological resources. This is not considered a significant impact.

Land use compatibility was also evaluated between the proposed land use plan and approved plans in the planning area. Three approved specific plans

are called out on the proposed land use plan and will act as the general plan designation for these areas to ensure compatibility.

Indirect Impacts

Indirect impacts of population increases and development are discussed in greater depth in other sections of the EIR. These indirect impacts include traffic, noise, reduction in air quality, and increased demands on public services, infrastructure, and community services. The proposed General Plan was designed to reduce these impacts through appropriate placement of land uses and the development of goals, policies, and implementation measures.

3.1.3 Mitigation Measures

Mitigation for impacts to land use as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

3.1.4 Residual Environmental Impacts

The elimination of prime agricultural, farmlands of statewide importance, unique farmland, and farmlands of local importance are considered a significant unavoidable adverse impact. Other impacts to land use will be reduced to a level of insignificance through implementation of proposed mitigation measures (implementation measures).

3.2 CIRCULATION

Existing conditions for circulation are discussed in Section 3.2 of the ESR portion of the General Plan document. The proposed Circulation Plan is located in Section 3.2 of the Goals and Policies portion of the General Plan document.

3.2.1 Criteria for Determining Significance

Impacts to circulation will be considered significant if one or more of the following situations occur:

- ▶ a LOS "D" is found for any study intersection, or
- ▶ the future volume to capacity ratio (v/c ratio) is greater than 1.00.

In order to evaluate the operating conditions of a circulation system, the concept of Level of Service (LOS) was developed. A LOS is a qualitative measure of the effect on traffic flow of factors such as speed, interruptions to traffic flow, and the driver's freedom to maneuver. There are six LOS ratings, LOS A through LOS F, each associated with a volume to capacity ratio (v/c ratio) for a given roadway. These LOS ratings are applicable to both intersections and arterial segments. Table 3.2-1 provides a list of the six ratings and their associated definitions and v/c ratio ranges.

3.2.2 Environmental Impacts

The majority of the Planning Area has yet to be developed and the planning of an adequate circulation system to support future development is vital.

Development of the proposed Circulation Plan took into account the Riverside County General Plan Circulation Element, regional facilities, and transit services in order to ensure compatibility.

The function of the Circulation Plan is to provide a master blueprint for implementation of the circulation system. It anticipates the travel demands within the City at buildout of the Land Use Plan of the General

Plan, and provides a map of desired alignments and classifications of arterial level roadways.

Proposed land use information was used to project future traffic at buildout of the proposed General Plan. Impacts are based on the Traffic Study prepared for the General Plan document and located in Appendix B. The proposed circulation plan was analyzed using a computerized traffic model developed for the City of Indio. The computer modeling process consists generally of the following seven individual but interrelated steps:

- ▶ definition of a traffic analysis zone (TAZ) system;
- ▶ definition of a roadway network to serve the zone system;
- ▶ determination of efficient and logical routes through the network between the individual TAZ;
- ▶ collection of land use information for each of the TAZ;
- ▶ determination of trip generation within each TAZ;
- ▶ determination of the distribution of trip ends between the TAZ for three individual trip purposes; and
- ▶ assignment of trips to the individual roadway segments of the overall roadway network.

The traffic model has been validated for 1992 conditions based on existing land use within the Planning Area and current traffic counts.

Trip generation within each Traffic Analysis Zones (TAZ) of the modeling area is based on land use data consistent with the proposed land use categories listed in Figure 3.2-1 of the ESR. Residential land uses are expressed in dwelling units. All other non-residential land uses are expressed in net acres.

To produce a forecast of traffic volumes within the modeling area, traffic must be loaded onto the roadway network in a manner which approximates how real traffic enters and uses a real roadway

Table 3.2-1

LEVEL OF SERVICE DESCRIPTIONS

Service Level	Capacity Ratio	General Description
A	0.0 - 0.60	Free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.
B	0.61 - 0.70	Stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.
C	0.71 - 0.80	Stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with other in the traffic stream. The selection of speed is affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.
D	0.81 - 0.90	High density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.
E	0.91 - 1.00	Operating conditions at or near the capacity level. All speeds are reduced to a low but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodated such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the stream will cause breakdown.
F	> 1.00	Forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Arrival flow exceeds discharge flow.

system. To accomplish this, the study area is subdivided into a TAZ system. Trip generation is determined for each of 3 traditional trip purposes: home-based work, home-based non-work, and non-home based.

The home-based work trip purposes represents all trips made from dwelling units to places of employment, both within and external to the study area. The home-based non-work trip purpose represents all trips made from dwelling units to non-work land uses. This includes trips made for purposes such as shopping, doctor visits, banking, recreation, etc. The non-home-based trip purpose includes all trips which do not have a residence as a point of origin, such as work-related trips from a place of employment, and the shipping of manufactures goods.

Trip generation is expressed in terms of "productions" and "attractions". Each trip made in the model has two "trip ends", a production end and an attraction end. The majority of production trip ends in the model are related to residential dwelling units; residences have relatively few attraction trip ends. Regardless of whether the direction the trip is from the residence to a shopping location, or from the shopping location to the residence, it is expressed as a home-based production at the residence end of the trip. Retail land uses on the other hand, have relatively few production trip ends; they primarily attract trips made from other land uses.

At buildout of the proposed General Plan, Planning Area land uses are estimated to generate approximately 1,497,282 total trip-ends and total land uses within the model extended study area are estimated to generate approximately 2,943,448 trip-ends. Trip attractions for all trip purposes have been balanced against trip productions.

Traffic volumes projected by the model for the General Plan network are shown on Figure 3.2-1.

The development of the proposed Circulation Plan included the analysis of the city preferred plan and an alternative plan. The alternative plan was found to create less impacts to circulation and was combined with additional recommendations listed below to make up the proposed circulation plan and

is shown on Figure 3.2-1 of the Goals and Policies section.

Recommended circulation is as follows:

- ▶ Provide a new overcrossing of the I-10 Freeway and East Valley Parkway at Madison Street as an Augmented Arterial classification from Fred Waring Drive to 42nd Avenue.
- ▶ Upgrade Madison Street from 50th Avenue to Fred Waring Drive to an Augmented Major classification from a Secondary classification.
- ▶ Upgrade Jefferson Street from 48th Avenue to Country Club Drive to an Augmented Major classification from an Arterial classification.
- ▶ Upgrade Monroe Street from 48th Avenue to Fred Waring Drive to a Major classification from a Secondary classification.
- ▶ Upgrade Monroe Street from Fred Waring Drive to the eastbound I-10 Freeway Ramps to an Augmented Major classification from a Secondary and Arterial classification.
- ▶ Upgrade Jackson Street from Highway 111 to the eastbound I-10 Freeway Ramps to an Augmented Major classification from a Secondary and Arterial classification.
- ▶ Upgrade 50th Avenue from Jackson Street to Van Buren Street to an Arterial classification from a Major classification.
- ▶ Upgrade 48th Avenue from Dune Palms Road to Dillon Road to an Augmented Major classification from a Major classification.
- ▶ Upgrade Highway 111 from Madison Street to Monroe Street to an Augmented Major classification from an Arterial classification.
- ▶ Upgrade Miles Avenue from Jefferson Street to Madison Street to a Major classification from a Secondary classification.
- ▶ Upgrade Fred Waring Drive from Washington Street to Monroe Street to an Augmented Major classification from a Major and Secondary classification.

- ▶ Upgrade Country Club Drive from 42nd Avenue to Jefferson Street to an Augmented Major classification from a Secondary classification.
- ▶ Upgrade Country Club Drive from Jefferson Street to Madison Street to a Major classification from a Secondary classification.

Proposed roadway cross-section for the roadway classification shown on the Circulation Plan are shown on Figure 3.2-2 of the Goals and Policies section. The Augmented Arterial and the Augmented Major cross-sections are proposed to provide enhanced capacity within restricted rights-of-way.

1. Augmented Arterial

The intent of the Augmented Arterial cross-section is to provide six through travel lanes with dual left-turn lanes. This will provide additional turning capacity at high demand intersections during peak hours.

2. Augmented Major

The intent of the Augmented Major cross-section is to provide six through travel lanes within a restricted right-of-way width. This cross-section would provide the through-lane capacity of an Urban Arterial classification within 110 feet of right-of-way width.

In addition to the upgrades identified above, the use of capacity augmentation features at intersections which may experience high travel demand during peak hours is recommended. Intersections which occur at the junction of roadways which may operate above Level of Service "C" design capacity for daily traffic conditions are identified on Figure 3.2-2.

3.2.3 Mitigation Measures

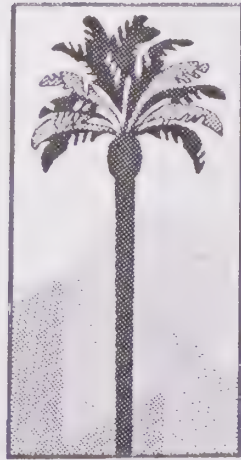
Mitigation for impacts to circulation as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.


3.2.4 Residual Environmental Impacts

With the roadway classification upgrades discussed previously, some roadway segments will operate slightly above Level of Service "C" design capacity (daily volume to capacity ratio higher than 0.80). All intersections after mitigation will operate well below LOS "D" which is the threshold and no volume to capacity ratios will exceed 1.00 within the Planning Area.




Figure 3.2-1
POST 2015 AVERAGE DAILY
TRAFFIC (ADT)

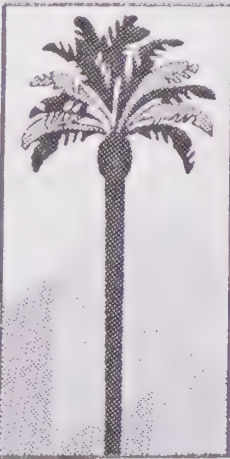




Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



north



INDIO
GENERAL
PLAN 2020

Figure 3.2-2
INTERSECTIONS REQUIRING
CAPACITY ENHANCEMENT



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'

3.3 INFRASTRUCTURE/PUBLIC SERVICES

The environmental setting for infrastructure/public services is contained within Section 3.3 of the ESR portion of the General Plan document.

3.3.1 Criteria for Determining Significance

Impacts on infrastructure and public services were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ implementation of the project would endanger the community and/or general public as a result of inadequate services, resources and/or safety measures, or
- ▶ implementation of the project would result in a demand on services that exceed the operating capabilities of the providers.

3.3.2 Environmental Impacts

Domestic Water

Implementation of the proposed General Plan will result in an increased demand for domestic water by both residential and commercial users. Water line extensions into undeveloped areas, creation of new pressure zones, and upgrades to the existing system will be required by the City of Indio and the CVWD in order to meet the increased demand. It is anticipated that domestic water demand will increase from approximately 4.2 billion gallons per year (BGY) to 29.1 BGY at buildout.

Sewer

Implementation of the proposed General Plan will increase the demand for sewer service from approximately 4.3 million gallons per day (MGD) to approximately 17.8 MGD. VSD and CVWD will need to extend sewer lines into undeveloped areas, construct sewer lift stations, and upgrade their

existing systems. VSD has the capacity to treat 7.5 MGD of wastewater and can expand up to 11.5 MGD. The treatment plant is currently treating between 4.3 to 4.7 MGD.

CVWD has the capacity to treat 700,000 gallons of wastewater per day at their Madison Avenue and Avenue 38 treatment plant. This facility is undergoing a multi-phase expansion that will increase the ultimate capacity to 20 MGD. The first phase will be capable of handling 2.5 MGD. VSD and the CVWD have the expansion capabilities to meet the sewer demand in their service areas at project buildout. Increased demand in each of the service areas will be monitored through the development review process.

Flood Control/Drainage

Land development that will occur as a result of implementation of the General Plan will increase the amount of impervious surfaces (roads, parking lots, structures, sidewalks, etc.) and result in an increase in the amount of runoff into the CVSWC and the storm drain system. To decrease flood hazards associated with new development, the City of Indio and the CVWD will need to upgrade the existing storm drain system and construct additional storm drain facilities. New Developments will have to retain stormwater runoff onsite.

Solid Waste

Approximately 62,000 tons of solid waste is generated per year in the Planning Area. Implementation of the General Plan will increase the amount of solid waste to approximately 395,840 (at 2.27 tons per person per year) tons per year. The Coachella Landfill is expected to reach capacity by the year 2014. The City of Indio will need to reduce the amount of waste being received at disposal sites through resource recycling, reuse and/or other alternative methods (AB 939).

Electricity

Implementation of the General Plan will result in an increased residential demand for electricity from approximately 177.7 million kilowatt hours per year

to 665.8 kilowatt hours per year at buildout. Transmission and distribution lines will need to be extended into undeveloped areas. Additional substations will also need to be constructed in outlying areas.

Although commercial and industrial demand increases cannot be determined due to the variety of potential building sizes, construction methods and uses, Imperial Irrigation District has indicated that they can service new development on demand and their system has been designed to grow with Indio and the surrounding area.

Natural Gas

SCG provides service on a demand basis. The residential demand for natural gas service will increase from approximately 7.6 million therms per year to approximately 34.9 million therms per year. Commercial and industrial demand will be determined during the project review process. SCG will need to extend their facilities into undeveloped areas. Natural gas is a nonrenewable resource and the City and SCG will need to continue to create conservation guidelines and standards as well as develop alternative energy sources.

Telephone/Telecommunications

GTE lines are located throughout the General Plan area and service is provided on a demand basis. Long distance telephone service is also provided throughout the area. Implementation of the General Plan should not have an impact on telephone or other telecommunication services.

Cable Television

Colony Cablevision provides service throughout the area and service lines are extended as development occurs. Implementation of the General Plan should not have an impact on cable television services.

3.3.3 Mitigation Measures

Mitigation for impacts to infrastructure/public services as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

3.3.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on infrastructure/public services are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

3.4 COMMUNITY SERVICES

The environmental setting for Community Services is contained within Section 3.4 of the ESR portion of the General Plan document.

3.4.1 Criteria for Determining Significance

Project impacts to community services are considered significant and adverse if:

- ▶ The project will cause or exacerbate a deficiency in the quantity or quality of community services.
- ▶ The project creates a demand for community services which exceeds the area facility standards or planned facilities.

3.4.2 Environmental Impacts

Schools

Implementation of the proposed plan will create a dramatic increase in the school age population. However, due to the long-range nature of the plan and changing demographic trends the exact number is difficult to determine. Future enrollment figures are based on the student generation rates determined in the Residential Development Schools Fee Justification Study for DSUSD prepared by David Taussig Associates, February 1993 and are discussed below.

At buildout, with a total population of 174,356, the school age population in the planning area is estimated to be approximately 22,727. Assuming the current distribution, there will be 12,391 elementary schools students, 5,668 middle school students, and 5,668 high school students. The estimated school age population will necessitate an additional 16.5 elementary schools, 5 middle schools, and 3 high schools. This increase only includes population increases within the planning area as a result of the implementation of the General Plan and does not take into account growth in neighboring jurisdictions.

Health Care Services

An increasing population will create additional needs for health care services within the community. Increasingly diversified services including hospitals, clinics, emergency care centers, and physicians will be needed to fully service the community.

Parks and Recreation

Increases in population will create additional demands for park and recreational services within the community. According to standards set forth in Section 3.4 of the goals and policies portion of the General Plan document, buildout of the General Plan will create the need for 3 acres per thousand population or 523 acres of parkland. The City currently has 52 acres of parks. The City will eventually maintain a goal of 3 acres per thousand population.

Library Services

Buildout of the proposed General Plan will require 87,178 square feet of library facilities and 209,227 volumes, according to current Riverside County library standards.

The Riverside County Free Library Service Standards (1987) has plans for an additional facility in the Shadow Hills area which would provide 9,000 square feet of space.

3.4.4 Mitigation Measures

Mitigation for impacts to community services as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

3.4.3 Residual Environmental Impacts

Following implementation of the proposed mitigation measures, the General Plan will not have a significant impact on community services.

3.5 COMMUNITY DESIGN

The environmental setting for Community Design is contained within Section 3.5 of the ESR portion of the General Plan document.

3.5.1 Criteria for Determining Significance

Project impacts to community design will be considered significant and adverse if:

- ▶ implementation of the proposed project will considerably degrade the existing design of the area, or
- ▶ changes to the Planning Area will decrease the perceived community character of residents.

3.5.2 Environmental Impacts

Implementation of the proposed General Plan would, without proper mitigation have a significant impact on community design. Currently, the majority of land within the planning area is undeveloped (unimproved and agricultural). The development of these lands occurring with buildout of the plan will significantly change the look of the community.

Section 3.5 of the goals and policies portion of the General Plan contains overall design guidelines for the development of the community. The development of large tracts of open land is an unique opportunity for Indio to create a positive community identity for the Planning Area.

The development of design criteria was aimed at creating an overall "theme" for the development of large and small scale projects to discourage haphazard, piece-meal development. The creation of "themes" is designed to encourage compatibility within development projects and adjacent developments, yet be broad enough to discourage the monotony of "cookie-cutter" design. Area wide design criteria is incorporated into the document for residential, commercial, industrial, and open space uses. This is considered a positive impact to the community.

The views toward Indio Hills are considered an important attribute to the community and the General Plan proposes these lands to be designated for open space uses, with limited development allowed. Development of ridgelines will be discouraged through appropriate policies and implementation measures of the goals and policies portion of the General Plan document.

3.5.3 Mitigation Measures

Mitigation for impacts to Community Design as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

3.5.4 Residual Environmental Impacts

Following implementation of the described mitigation measures, impacts to Community Design are less than significant; therefore, no significant unavoidable adverse impacts remain.

3.6 ECONOMIC DEVELOPMENT

The environmental setting for Economic Development is contained within Section 3.6 of the ESR portion of the General Plan document.

3.6.1 Criteria for Determining Significance

Impact to economic development are considered significant the following occurs:

- ▶ implementation of the proposed project related population increases and housing demand exceeds future forecasted growth projections, or
- ▶ the project places a demand for state, county, and local services that results in a net economic loss to the agency.

3.6.2 Environmental Impacts

Implementation of the proposed plan will result in increases in the amount of services and infrastructure to be provided to future residents and those working in the community. However, the proposed project will also result in significant increases in tax revenues, from both property tax and sales tax, and revenues from citywide fees. The significant increase in property tax is attributed to both the increased land area under the city's control and the intensification of uses under the proposed general plan. Additional revenues from fees will be created through additional development as a result of implementing the proposed plan. Job opportunities will also benefit the community economically through the jobs created by this project, including but not limited to employees of the planned industrial and commercial developments. Workers to service the growing residential population including gardeners, babysitters, house cleaners, plumbers, contractors, etc. Temporary employment of construction workers, real estate sales persons, and landscape contractors will also be created.

Increases in commercial land uses will help Indio compete with neighboring jurisdictions for sales revenues. Implementation will create increases in

hotel tax generated by the development of hotels and resorts within the community.

3.6.3 Mitigation Measures

Mitigation for impacts to community services as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

3.6.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on economic development are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

3.7 GOVERNMENT

The environmental setting for Government is contained within Section 3.7 of the ESR portion of the General Plan document.

3.7.1 Criteria for Determining Significance

Impacts on government are considered significant and adverse if:

- ▶ The proposed project creates additional responsibilities upon government entities that can not be adequately handled.

3.7.2 Environmental Impacts

The goals and policies portion of the General Plan document attempts to standardize the governmental structure of the community. Implementation of the General Plan will result in a more organized government structure and will increase the public's knowledge about it. This is considered a positive impact.

3.7.3 Mitigation Measures

Mitigation for impacts to Government as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

3.7.4 Significant Unavoidable Adverse Impacts

With implementation of the described mitigation measures, impacts on city government are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

ENVIRONMENTAL RESOURCES

4.1 OPEN SPACE

The environmental setting for Open Space is contained within Section 4.1 of the ESR portion of the General Plan document.

4.1.1 Criteria for Determining Significance

Impacts on open space were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ convert area designated as open space to urban land uses, or
- ▶ introduces a visual intrusion that blocks or degrades views of the Indio Hills.

4.1.2 Environmental Impacts

Currently open space uses, excluding unimproved and lands under construction, make up 6,814 acres or 26 percent of the Planning Area. The open space categories for existing land uses consist of community and regional parks, golf courses, agricultural and mining uses, vacant land, and areas currently under construction at the time of the 1991 survey. The largest expanses of open space areas within the Planning Area are generally located in the City's Sphere-of-Influence, north of I-10 and are currently under the jurisdiction of the County of Riverside. Refer to Section 3.1 for further discussion on the impacts of the open space designation under Land Use.

Buildout of the proposed General Plan will increase open space acreages to 7,124 which represents 26 percent of the Planning Area. The open space category is a completely new designation in the

proposed plan and consists of golf courses, open space, parks and recreation, and resource recovery. The number of acres of open space will actually increase under the proposed plan. As the area dedicated to public and private open space will remain the same, the proposed plan will designate agricultural areas that are currently considered open space to urban uses.

Buildout of the proposed plan will have a significant impact on agricultural land uses which are currently regarded as open space. Impacts on agricultural resources are further explained in Section 4.3, below.

Implementation of the proposed General Plan will introduce urban land uses north of Interstate 10 in areas which are currently designated as agriculture and open space uses under the County of Riverside General Plan. This area also contains the visually prominent Indio Hills which contains the largest continuous expanse of open space in the Planning Area. Building of infrastructure and structures in this area has the potential to significantly impact the visual resources of this open space area. The intent of the land use and open space policies of the proposed General Plan is to protect the Indio Hills from visual intrusion and wildlife habitats from being degraded by designating the area north of the flood control berm as open space.

4.1.3 Mitigation Measures

Mitigation for impacts to open space as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

4.1.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on open space are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

4.2 SOILS

The environmental setting for soils is contained within Section 4.2 of the ESR portion of the General Plan document.

4.2.1 Criteria for Determining Significance

Impacts of on soils were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ construction or operation of a project as a consequence of the General Plan would result in a substantial nuisance relative to wind or water erosion of soils, or
- ▶ disrupt, displace, or cause compaction or overcovering of soils.

4.2.2 Environmental Impacts

Implementation of the proposed plan will result in the loss of prime agricultural land within the Planning Area. These soils consist of 6,577 acres and are generally located north of I-10 and the south central portion of the Planning Area. Because of economic pressures in the region, prime agricultural soils are being converted to urban uses especially for areas within incorporated cities of the Coachella Valley. The loss of prime agricultural soils is a significant impact of the implementation of the proposed plan. Agricultural impacts as a result of implementing the proposed plan are discussed further in Section 4.3 below.

The majority of the Planning Area is within a high wind hazard area. Areas that contain Myoma fine sand, Indio fine sandy loam, Coachella fine sandy loam, and Indio very fine sandy loam are subject to erosion from wind. Construction grading operations have the potential to disturb the soils making them subject to blowing during periods of high winds causing air quality degradation in the area.

Soils within the Indio Hills area are also subject to high erosion from water. Any disturbance of soils in the steep hillsides from grading operations have the

potential to significantly impact soils during periods of severe storms or high winds if the soils are not protected.

4.2.3 Mitigation Measures

Mitigation for impacts to soils as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

4.2.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on soils are mitigated to insignificant with the exception of agricultural soils. The loss of prime agricultural lands is considered a significant and unavoidable environmental impact of the proposed plan.

4.3 AGRICULTURAL RESOURCES

The environmental setting for Agricultural Resources is contained within Section 4.3 of the ESR portion of the General Plan document.

4.3.1 Criteria for Determining Significance

Impacts of on agricultural resources were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ conversion of prime agricultural land to non-agricultural uses, or
- ▶ prevent the agricultural productivity of prime agricultural lands.

4.3.2 Environmental Impacts

The proposed General Plan does not propose any agricultural uses. Existing agricultural uses consist of 6,030 acres or 22.7 percent of the planning area. These uses are located in the fringe areas of the community. The decreasing importance of agricultural production to the community has caused the transition to more urban uses.

The implementation of the proposed plan will result in the eventual elimination of agricultural lands within the planning area. Currently, the planning area contains 6,578 acres considered prime farmlands, 326 acres of farmlands of statewide importance, 118 acres considered unique farmlands, and 1,132 acres considered farmlands of local importance according to the California Department of Conservation, Farmland Mapping and Monitoring Program.

Provisions have been made in the General Plan to allow for the continued use of existing agricultural lands until eventual development of these lands according to the proposed General Plan.

4.3.3 Mitigation Measures

Mitigation for impacts to agricultural resources as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

4.3.4 Residual Environmental Impacts

The loss of prime agricultural lands is considered a significant and unavoidable environmental impact.

4.4 WATER RESOURCES

The environmental setting for water resources is contained within Section 4.4 of the ESR portion of the General Plan document.

4.4.1 Criteria for Determining Significance

Impacts of water resources were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ depletion or recharge of the groundwater occurs which affects a useable aquifer used for municipal, private or agricultural purposes;
- ▶ would substantially degrade the water quality and/or contaminate the public water supply;
- ▶ would result in inundation and/or groundwater level changes that causes an increase in soil settlement or ground swelling which damages structures, utilities or public works; or
- ▶ inundation and/or groundwater recharge causes reduced soil pore pressure increasing the likelihood of ground liquefaction should an earthquake occur.

4.4.2 Environmental Impacts

As unimproved land and agricultural properties are converted into more intense urban development, there will be an increase demand on groundwater resources. Additionally, groundwater recharge will decrease as more impervious surfaces are created throughout the area. The CVWD and the DWA have developed a groundwater recharge program and water conservation guidelines.

Development of the area will increase the amount of concentrated urban storm runoff. This runoff will carry pollutants such as detergents, household cleaning products, pet waste, pesticides, and petroleum products associated with residential, commercial and industrial uses into the storm drain system, the CVSWC and groundwater having the

potential to degrade water quality in the Planning Area.

4.4.3 Mitigation Measures

Mitigation for impacts to water resources as a result of the implementation of the proposed plan are contained within the goals and policies portion of the General Plan.

4.4.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on water resources are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

4.5 BIOLOGICAL RESOURCES

The environmental setting for Biological Resources is contained within Section 4.5 of the ESR portion of the General Plan document.

4.5.1 Criteria for Determining Significance

Impacts on biological resources were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ loss of individuals or populations of a federal or state listed threatened or endangered species;
- ▶ substantial loss of individuals or populations of a federal candidate, regionally rare, or otherwise sensitive species;
- ▶ loss of a regionally unique or sensitive habitat, such as wetlands, or palm oasis;
- ▶ substantial loss of species diversity in natural vegetation and wildlife habitat; or
- ▶ interferes or prevents the movement of resident wildlife (e.g., wildlife corridors).

4.5.2 Environmental Impacts

The conversion of certain portions of undeveloped areas north of Avenue 38 and the flood control levee in the northern portion of the Planning Area to urban uses as a result of implementation of the General Plan will contribute significantly to the devastation of sensitive wildlife habitat.

Although the project will result in the development of much of the unimproved land within the planning area, large tracts of land in the northern portion of the planning area adjacent to the Indio Hills will be preserved as open space, with limited development allowed, as a result of the proposed plan. These areas if allowed to remain under Riverside County's current General Plan would eventually be developed at much higher densities than would be allowed under the proposed General Plan.

A large portion of the land to be developed is currently in agricultural production. The loss of agricultural lands may impact a number of wildlife species which use these areas.

The two desert plant communities regarded as sensitive or rare and possibly containing sensitive plant and wildlife found in the planning area are stabilized dunes and fan palm oases. Implementation of the proposed plan should not affect the fan palm oases since they are located in areas designated as open space and resource recovery. Stabilized dunes however will be affected by the plan since portions of these areas are designated for residential and commercial uses.

The Sonoran Desert Scrub has the potential for rare plant and sensitive wildlife species. The vast majority of this community is located in areas designated as open space or mineral resource and should not create impacts. However, portions of this community are located in areas planned for development under the proposed general plan.

Areas with a high potential for biological sensitivity are generally located in the areas north of the east side dike and are designated for open space uses. Limited areas are located south of the dike and in the northwestern portion of the site and are slated for residential development.

Direct and indirect impacts on plant and wildlife will include elimination of suitable habitat through conversion to more urban uses and the actual construction of proposed development on adjacent plant and wildlife communities. Loss of habitat and the introduction of human activities in close proximity to plant and animal habitats will not only increase the competition between species but degrade the remaining habitats.

Construction impacts will result in increased siltation and erosion on adjacent habitats. Siltation of existing waterways will adversely impact plant and wildlife. Desert plants are slow growing and long living, but are also very sensitive to erosion and root exposure.

4.5.3 Mitigation Measures

Mitigation for impacts to biological resources as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

4.5.4 Residual Environmental Impacts

Following implementation of mitigation measures the project impacts biological resources will be reduced to insignificant; therefore, no significant unavoidable adverse impacts remain.

4.6 ENERGY CONSERVATION

The environmental setting for Energy Conservation is contained within Section 4.6 of the ESR portion of the General Plan document.

4.6.1 Criteria for Determining Significance

Impacts on energy conservation were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ result in the wasteful, inefficient and unnecessary consumption of fuel and/or energy, or
- ▶ would greatly increase the demand for energy and require the development of a new source of energy.

4.6.2 Environmental Impacts

The project will result in a significant amount of energy consumption during land development and construction of projects and at ultimate buildout. The precise amount of consumption of electricity and natural gas can be determined during development review. Although SCG and Imperial Irrigation District have indicated that they can provide service on demand, natural gas and electrical energy consumption represents a loss of a nonrenewable resource resulting in a significant impact.

4.6.3 Mitigation Measures

Mitigation for impacts to energy conservation as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

4.6.4 Residual Environmental Impacts

Following implementation of mitigation measures the project impacts energy resources will be reduced to insignificant; therefore, no significant unavoidable adverse impacts remain.

4.7 MINERAL RESOURCES

The environmental setting for Mineral Resources is contained within Section 4.7 of the ESR portion of the General Plan document.

4.7.1 Criteria for Determining Significance

Impacts on mineral resources were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ conversion of land classified by the State as MRZ-2 to non-mineral extraction uses, or
- ▶ prevent the mineral extraction and/or preservation of lands classified as MRZ-2.

4.7.2 Environmental Impacts

Currently there are no lands within the jurisdiction of the City that are designated by the State as containing significant aggregate resources (MRZ-2). The State has designated three areas within the Indio Hills as containing significant aggregate resources. Two of which are contained within the Planning Area of the General Plan. The only active aggregate operation within the Planning Area is Granite Construction aggregate quarry. This area has been designated for mineral resource extraction in the proposed plan. Areas to the south, east and west of the mine are designated as open space in the proposed plan. Areas to the north of the mine area are within the Indio Hills and under the jurisdiction of the County of Riverside; however, those areas are also designated for open space uses.

There is the potential for significant impacts to mineral extraction from the siting of incompatible land uses in the vicinity of the existing Granite Construction sand and gravel operation. Mitigation through the policies and implementation measures provided in the proposed plan will reduce incompatibility of land use problems to insignificant through such measures as providing buffer zones between mining operations and residential and

commercial land uses, and requiring development proposals be reviewed for compatibility through the use of a compatibility of land use index chart.

4.7.3 Mitigation Measures

Mitigation for impacts to mineral resources as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

4.7.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on mineral resources are mitigated to insignificant.

4.8 CULTURAL RESOURCES

The environmental setting for Cultural Resources is contained within Section 4.8 of the ESR portion of the General Plan document.

4.8.1 Determination of Significance

Under CEQA, an impact is characterized as having a significant environmental effect if it may cause damage to an "important" archaeological or historic resource. Appendix J of CEQA identifies an "important archaeological resource" as one which:

- (a) Is associated with an event or person of:
 - (1) recognized significance in California or American history, or
 - (2) recognized scientific importance in prehistory.
- (b) Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions;
- (c) Has a special or particular quality such as oldest, best example, largest or last surviving example of this kind;
- (d) Is at least 100 years old and possesses substantial stratigraphic integrity; or
- (e) Involves important research questions that historical research has shown can be answered only with archaeological methods.

Inventory data are often insufficient to determine the importance of cultural resources, particularly archaeological resources. A testing program to provide additional data can be required to determine the age of a resource, its integrity, and/or its ability to answer important research questions. This information is critical in determining a site's importance.

While historic resources are not specifically addressed by prescribed procedures under CEQA, policy established by the California Office of Historic

Preservation recommends evaluating these resources according to the criteria established for the National Register of Historic Places (NRHP). Under Criterion D, historic sites that are 50 or more years old are considered significant if they are objects of national, state and/or local importance that possess integrity of location, design, setting, materials, workmanship, feeling, or association and have yielded, or may be likely to yield, information important to history. In addition, exceptional historic sites less than 50 years old can also be eligible for inclusion.

Paleontological Resources

- Any ground disturbing activities, such as construction and associated grading, which have the potential to destroy important paleontological resources.

4.8.2 Environmental Impacts

The significance of the existing historic resources associated with mining and ranching cannot be determined because they have not yet been properly inventoried. This will require a combination of archival and field studies. These resources can be evaluated at the same time they are inventoried.

Implementation of the proposed project has the potential for loss of archaeological value through the disturbance of historic and prehistoric sites in the Planning Area. Future development also has the potential to discover previously unknown sites.

The goals and policies portion of the General Plan document will set forth procedures by which additional studies will be required prior to development and will fully mitigate any impacts to cultural resources to a level of insignificance.

Sedimentary rock units within the Planning Area which have a high potential to contain nonrenewable paleontological resources are the Mecca Formation, Palm Springs Formation, Canebrake Conglomerate, Ocotilla Conglomerate, and older Quaternary Lake Sediments. Construction operations such as grading, within these sedimentary rock formations have the potential to disturb and destroy significant

paleontological resources. Provisions are provided within the policies and implementation measures of the proposed plan to monitor excavations and protect paleontological resources in the Planning Area.

4.8.3 Mitigation Measures

Mitigation for impacts to cultural resources as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

4.8.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts remain adverse, but are not significant.

PUBLIC HEALTH AND SAFETY

Evaluation of the City's General Plan on health and safety impacts is based on both the potential for upset and the consequences of any project-related adverse event as a result of the implementation of the General Plan. The significance of a potential upset increases as either (or both) of these two parameters increase. By definition, adverse safety impacts result only from abnormal operation of a project. Beneficial impacts may result from any direct or indirect safety improvements resulting from project implementation.

5.1 NOISE

The environmental setting for noise is contained within Section 5.1 of the ESR portion of the General Plan document.

5.1.1 Criteria for Determining Significance

Impacts of noise were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ the impact significance criteria in this EIR correspond to the land use compatibility table presented in the Section 5.1 of the ESR. This table shows that acceptable noise levels vary with the type of land use impacted. For instance, single-family residential areas can be exposed to noise decibels up to 60 dBA before a significant impact would occur,
- ▶ in cases where the ambient (existing) noise levels in an area exceed the significance threshold shown on the land use compatibility table, an impact would be considered to be significant if the additional noise raised the ambient level by over 3 dBA, or

- ▶ increase the noise level by 5 dBA and remain under the significance threshold for an existing land use.

5.1.2 Environmental Impacts

Implementation of the policies of the community development element of the General Plan will increase ambient noise levels in the Planning Area. Two characteristic noise sources are typically identified with continuing urban mixed use development and roadway improvements as proposed in the goals and policies section of the General Plan. In the Planning Area sensitive receptors are also exposed to noise impacts from the Bermuda Dunes Airport, I-10, and the railroad. Construction activities, especially heavy equipment operation, will create short-term noise level increases in proximity to any proposed development or improvement. With buildout of a specific project increases in vehicular traffic on area streets are expected, creating a higher noise exposure. The goals and policies of the circulation section of the plan are proposed to reduce daily miles traveled which would in turn infer less noise produced. However, if mileage reductions are gained by the rerouting of traffic to new areas, there is the potential to impact additional receptors. As noise impacts from the airport and railroad cannot generally be regulated by the city, impacts to sensitive noise receptors can be reduced or eliminated by the land use regulations.

Construction Noise Impacts

Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment and its level of activity. Short-term construction noise impacts tend to occur in discrete phases dominated initially by large earth-moving

sources, and later for finish construction. The heavy equipment noise typically ranges up to about 89 dBA at 50 feet from the source (USEPA 1971). Point sources of noise emissions are atmospherically attenuated at a rate of 6 dB per doubling of distance.

Construction noise is considered necessary and is of limited duration. Construction does not typically occur 24-hours per day, and the CNEL produced by 8 and 12 hours of construction performed between the hours of 7:00 a.m. and 7:00 p.m. is 84 and 86 dBA at 50 feet, respectively. Appendix E contains the allowable noise for construction and the distance to that value for the various types of land use.

Vehicular Noise Impacts

Long term noise concerns from the implementation of the General Plan center primarily on mobile source noise emissions on the major roadways in and around the Planning Area. Future noise impact concerns were addressed using the Caltrans microcomputer version of the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The model calculates the Leq noise level for a particular set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, speeds and noise barriers. Calculations were made for noise exposure adjacent to 187 roadway segments for year 2015 traffic both without and with project implementation. As with the calculations performed for the existing traffic, the same assumptions relative to vehicle mix and rush hour timing were used. However, due to the increased number of vehicles in the project area speeds were reduced by 10 mph to a minimum of 30 miles per hour (freeway speeds were averaged at 55 mph). Appendix E summarizes the calculated CNEL contours at 50 feet from the roadway centerline for each analysis segment, and shows the distance from the centerline to the 75, 70, 65, and 60 dBA CNEL contours for noise sensitive land uses.

As shown in Appendix E, project implementation will raise the CNEL along Madison Street between East Valley Parkway and Fred Warning Drive to 62 to 75 dBA CNEL. Furthermore, project implementation will raise the CNEL along this street from 70 to 73 dBA between 40th and 41st Avenues. Finally, a level of 73 dBA CNEL is predicted along Madison

Avenue between Fed Warning Drive and Miles Avenue where not noise will be introduced with project. Since this roadway does not exist. These are considered significant impacts of project implementation. Inversely, beneficial impacts will be produced along Clinton Street between 41st Avenue and unnamed street, along 41st Avenue between Madison and the unnamed street, and along Dr. Carreon Blvd. between Arabia and Jackson Streets due to a reduction of 3 dBA CNEL or more.

Airport Noise Impacts

Overflights from the Bermuda Dunes Airport does effect the west central portion of the Planning Area. Noise generated by the aircraft overflights exceeds the 60 CNEL as indicated on Figure 5.1-1 located within Section 5.1 of the ESR. Sensitive receptors to be located in the aircraft overflight area will be subject to noise levels within the normally acceptable range (60 CNEL) as long as acoustical report and noise assessments are required for all new residential development proposed to be located in the overflight area. Goals and policies contained within the noise and airport portions of the proposed plan will mitigate noise impacts of the airport to insignificant. Noise concerns of airport operations will need to be incorporated into land use planning in the general area of the airport to reduce future noise and land use incompatibilities.

Railroad Noise Impacts

Current acceptable noise levels adjacent to the Southern Pacific Railroad lines in Indio require a setback for sensitive receptors of over 4,000 feet from a rail grade crossing and 1,050 feet from a railroad line (see Table 5.1-3 in the ESR). Over the buildout of the General Plan it is anticipated the number of trains using the rail lines will increase. Railroad generated noise is of a particular annoyance at night. Goals and policies are provided in the proposed plan to provide the City guidance in siting sensitive noise receptors in close proximity to the railroad.

Land Use Compatibility

There is the possibility of conflicts in areas where sensitive noise receptors could be located in proximity to noise producers. Table E-5 in Appendix E shall be used as a guide to future land use considerations within the Planning Area. Goals and policies with the proposed plan require in areas of 65 CNEL or greater, acoustical studies for sensitive noise receptors such as residences, hospitals, and schools. Recommendations made in the acoustical studies will be incorporated in the design of the proposed development. Implementation of the policies of the proposed plan will reduce noise impacts on future land uses.

5.1.3 Mitigation Measures

Mitigation for impacts from noise as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

5.1.4 Residual Environmental Impacts

With implementation of the described mitigation measures, noise impacts remain adverse, but are not significant.

5.2 AIR QUALITY

The environmental setting for Air Quality is contained within Section 5.2 of the ESR portion of the General Plan document.

5.2.1 Criteria for Determining Significance

The SCAQMD is the governing agency and sets significance criteria for air emissions from new sources within the South Coast Air Basin (SCAB) in which the city of Indio is located. These emissions are also under the jurisdiction of the California Ambient Air Quality Standards (CAAQS) as well as the less stringent National Ambient Air Quality Standards (NAAQS). For the purposes of this document, air quality impacts are considered significant if they:

- ▶ Exceed daily emission criteria established by the SCAQMD. For operational emissions in the Coachella Valley these levels are as follows:

CO - 550 Lbs/day
 NO_x - 100 Lbs/day
 ROG - 75 Lbs/day
 SO_x - 150 Lbs/day
 PM₁₀ - 150 Lbs/day

However, since a project's impact is limited during the construction phase, a different set of criteria are used. For construction, impacts are considered significant if the following levels are exceeded:

CO - 24.75 tons/quarter
 NO_x - 2.5 tons/quarter
 ROG - 2.5 tons/quarter
 SO_x - 6.75 tons per quarter
 PM₁₀ - 6.75 tons/quarter

Regardless of the quarterly levels, if construction emissions on an individual day exceed 550 pounds per day for CO, 100 pounds per day for NO_x, 75 pounds per day for ROG, or 150 pounds per day for PM₁₀, they are considered as significant.

- ▶ Result in emissions that exacerbate existing air quality conditions where air quality standards are already exceeded or result in exceedance of air quality standards.
- ▶ Create air emissions which exceed either the CAAQS or NAAQS.
- ▶ Violate County Rule 402 (Nuisance) or Rule 403 (Fugitive Dust).
- ▶ Violate City of Indio Ordinance No. 1138 for fugitive dust.

5.2.2 Environmental Impacts

An Air Quality study was prepared by Chambers Group, Inc. and is contained in Appendix E. Analysis of the impacts of the implementation of the proposed plan are summarized below.

Air quality concerns can be divided into short- and long-term impacts. Short-term impacts are typically associated with construction and grading activities necessary in the course of developing the various identified land uses. Long-term impacts are typically associated with build-out conditions. These emissions are then further divided into stationary and mobile sources.

Short-Term Impacts

Exhaust Emissions

Construction equipment will create exhaust pollutants from onsite earth movement and from equipment bringing concrete and other building materials to the site. With regard to nuisance odors, air quality impacts are typically confined to the immediate vicinity of the equipment itself. By the time such emissions reach any sensitive receptor sites away from the project site, they are usually diluted to well below any level of air quality concern. An occasional "whiff" of diesel exhaust from trucks accessing a construction site from public roadways may result. Such brief exhaust odors are an adverse, but not significant, air quality impact.

Temporary impacts will result from project construction activities within the General Plan areas proposed for development. Grading and construction activities will consume diesel fuel and thereby produce combustion by-products. Because there is no way of knowing the level of construction that will occur with implementation of the proposed plan, quantities of emissions released can be estimated from data presented in the South Coast Air Quality Management District (SCAQMD) Handbook. If daily emission exceed the emissions criteria, the individual project would have a significant impact for daily emissions.

Fugitive Dust

Site clearing, grading, and equipment travel on unpaved surfaces will generate considerable quantities of fugitive dust during the development of most projects. As with exhaust emissions, there is currently no way of knowing the level of construction to be performed at any one time. Therefore, this analysis focuses on the maximum amount of construction which can proceed at any one time before a significant impact would be anticipated. AP-42 (EPA 1985) estimates that each acre of land disturbed generates 1.2 tons per month (110 pounds per day) of total suspended solids (or PM_{30}) particulate matter from dust lofting into the air. This value will vary with soil moisture, silt content, wind speed, and several other factors. The unhealthful, regulated PM_{10} fraction typically consists of 45 percent of the PM_{30} fraction. Based on the SCAQMD threshold value of 150 pounds of PM_{10} on a daily basis, as many as 3 acres could be under active construction on a daily basis without creating a significant impact. Twice daily watering (required by SCAQMD Rule 403; and an accepted measure in accordance with the City of Indio Ordinance No. 1138) typically implemented on any sizable construction job, can reduce this value by at least 50 percent which would raise the allowable area of construction to about 6 acres per day. Active construction on a larger area could produce a significant impact.

Miscellaneous Emissions

Other short-term impacts that are anticipated to result from construction are onsite paving,

application of paints and architectural coatings, and increased emissions from the storage and transfer of diesel for project-related construction vehicles and gasoline for worker vehicles.

Onsite Paving

In addition to equipment emissions produced during any paving operations, the application of asphalt has the potential to release large quantities of volatile organic constituent (VOC) emissions if cutback asphalt is used. These VOC emissions are also considered as ROG emissions.

Though the quantity of VOCs released could be construed as a temporary significant impact, for construction, the paving of a dirt surface has the long-term beneficial effect of reducing PM_{10} emissions for the subsequent operation and is typically considered a mitigation measure. Thus, though adverse, these emissions are typically not considered as significant.

The Application of Paints and Architectural Coatings

Based on SCAQMD Rule 1113, architectural coatings can produce no more than 2.08 pounds of volatile emissions per gallon applied. Table 5.2-8 in Appendix E has been developed as a screening measure to gauge the emissions produced from coating operations. The table presents emissions for an application thickness of 1 millimeter (mm) of coating. The emissions must then be converted to the desired thickness. In accordance with the Handbook, wood and metal surfaces typically receive about 1 to 4 mm of coating whereas concrete and masonry receive 5 to 30 mm.

Storage and Transfer of Fuels

Gasoline will also be necessary for worker vehicles. In accordance with the methodology presented in AP-42, the dispensation of this fuel will produce approximately 1.8 pounds of ROG per 1,000 gallons. Furthermore, the storage of this fuel in underground tanks at service stations will produce 1.0 pound of ROG for every 1,000 gallons dispensed and the filling of these underground tanks will contribute an

additional 0.3 pounds per 1,000 gallons. (These emissions will be reduced in future years as low emissions gasolines are refined and better methods of vapor recovery are installed.) Therefore, 3.1 pounds of emissions will be produced for every 1,000 gallons dispensed. The current estimate for automobiles and light trucks is 25 mpg but this value will continue to rise over time to about 33 mpg in 2010. These values are considered insignificant for a typical construction project and will not of themselves adversely affect the local air quality. However, all construction emissions must be considered as a whole and if the level of ROG from fueling operations causes daily emissions to exceed the daily ROG threshold, a significant impact would be anticipated.

Long-Term Impacts

Long-term impacts are expected by both mobile and stationary sources. The types of impacts expected are vehicular emissions, fossil fuel combustion in the production of electricity, onsite combustion of natural gas for heating and cooking, evaporative emissions from storage and dispensing of fuel for vehicles, and combustion emissions from the use of lawn mowers, edgers, blowers and other landscape equipment.

Table 5.2-1 presents the combined projected mobile and stationary source emissions produced in the planning area in the year 2015. Note that these values exceed the SCAQMD thresholds for significance and a significant impact is anticipated. Furthermore, these emissions contribute to existing exceedances of both the CAAQS and NAAQS also making them significant.

Table 5.2-1

YEAR 2015 AIR POLLUTION EMISSIONS FOR INDIO PLANNING AREA

Pollutant	Mobile Sources (Lb/day)	Stationary Sources (Lb/day)	Total Emissions (Lb/day)
Carbon Monoxide	152,377	5,152	157,529
Nitrogen Oxides (NO _x as NO ₂)	24,309	10,533	34,842
Reactive Organics	18,320	2,639	20,959
Sulfur Oxides (SO _x as SO ₂)	2,892	758	3,650
Particulate Matter	4,951	275	5,226

Consistency with the AQMP

CEQA requires that projects be consistent with the AQMP. A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the AQMP by fulfilling the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed and providing local agencies with ongoing information assuring local decision-makers that they are making

real contributions to clean air goals contained in the 1991 AQMP and PM₁₀ Plan. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review. This is because the AQMP strategy is based on projections from local General Plans. Therefore, projects that are consistent with the local General Plan are considered consistent with the air quality-related regional plan. The proposed General Plan will therefore require a consistency determination.

There are two key indicators of consistency with the AQMP. The first is that the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. The second is that the project not exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out and phase.

Consistency is then determined by performing an analysis of the project with the assumptions of the AQMP for the year 2010. The AQMP takes the regional jobs/housing balance (as well as many other variables) into account in its prediction of future air quality. Therefore, if development in the project area has been considered in the AQMP, the project will generally be found to be consistent with the Plan.

A subregion is balanced if it had an employment to housing ratio of 1.27 in 1984 and a projected employment to housing ratio of 1.22 in 2010. Ideally, each city in the greater southern California area would achieve this ratio to attain the overall balance reducing the need for extended commuter trips. This however, is not always practical due to the locations of employment centers and housing areas which tend to be grouped as a result of zoning ordinances as well as budgetary and practical constraints. Furthermore, a balance of jobs to housing does not ensure that those jobs are filled by local residents.

Coachella Valley

The Coachella Valley has increased its jobs/housing balance from 0.58 to 0.66 over the period from 1983 to 1992. Based on SCAG projections, the valley is estimated to continue increasing its jobs/housing balance. The ratio is projected at 0.73 in 2010 increasing to 0.80 in 2020. Excluding seasonal residency, the Coachella Valley is projected to have a jobs/housing balance of 1.14.

East Coachella Valley

Due to more rapid increases in the number of dwelling units, the East Coachella Valley has

decreased its jobs/housing balance from 0.81 to 0.68 since 1983. Based on the projected increases in employment, the East Valley's jobs/housing balance is projected to stabilize at 1.00 as its economy diversifies. Excluding seasonal residency, the East Valley is projected to have a jobs/housing balance of about 1.25 by build out, reflecting the area's transition to a more diversified employment center.

City of Indio

Under the existing SCAG trend, Indio is projected to have a jobs housing balance of 0.72 by 2010 and 0.63 by 2020. Based on the City of Indio's projection of approximately 38,357 dwelling units by build out, and the employment projection presented in Section 3.6.4, Indio will have a projected jobs/housing ratio of 0.84 by build out under enhanced conditions. However, excluding seasonal residency, Indio's jobs/housing balance is projected to be somewhat higher, at about 1.05. Although Indio is projected to add a significant amount of jobs over the next three decades, the potential for a significant amount of residential development keeps the jobs/housing balance relatively stable.

These trends for both the city and the region show that the general area is increasing in the number of jobs to a greater extent than the number of dwellings and is making progress towards a jobs/housing balance. Therefore, the area, and the General Plan are considered to be in conformance with the AQMP, and General Plan adoption will not present a significant adverse impact.

Cumulative Impacts

The City of Indio is located in the SCAB which is out of attainment for both the state and federal limitations for both ozone and carbon monoxide and the state particulate standard. Though the goal of the 1991 AQMP is to reach federal attainment for CO, NO₂, PM₁₀, and ozone in the years 2000, 2000, 2006, and 2010, respectively and the state standards for attainment for CO and NO₂ are by the years 2005 and 2000, respectively, the state standards for PM₁₀ and ozone will not be met until beyond the year 2010. However, in accordance with the State Implementation Plan (SIP) for PM₁₀ in the Coachella Valley (SCAQMD 1990), Coachella Valley

will reach attainment for the federal standards for PM_{10} by 1995. Therefore, in accordance with SCAQMD methodology, even if air emissions can be reduced to levels below those considered significant on a daily basis, all emissions are significant when considered on a cumulative basis, and must be mitigated to the extent feasible. Furthermore, the Coachella Valley can only achieve the federal and state standards for exhaust pollutants by the dates specified if all projects mitigate their adverse air quality impacts (including those that are not of a level of daily significance) using state-of-the-art mitigation measures applicable at the time of project construction and subsequent occupancy.

5.2.3 Mitigation Measures

Mitigation for impacts to air quality as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

5.2.4 Residual Environmental Impacts

Implementation of the above mitigation measures will reduce the air emission impacts. However, when considered on a large scale basis NO_2 , ROG, and PM_{10} emissions (especially that due to land disturbance) are expected to remain significant. All other air emissions are considered adverse as they contribute to the regionally degraded air basin.

5.3 POLICE AND FIRE SERVICES

The environmental setting for Police and Fire Services is contained within Section 5.3 of the ESR portion of the General Plan document.

5.3.1 Criteria for Determining Significance

Impacts on police and fire were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ would place residents or the general public in a situation of endangerment as a result of inadequate services, resources, and/or safety measures, or
- ▶ create or exacerbate an existing fire hazard, or expose people to high fire hazard conditions without adequate fire protection.

5.3.2 Environmental Impacts

Implementation of the proposed plan will require additional police and fire services upon buildout to service the City's public safety needs. It is estimated an additional 255 police (based on the City's desired ratio of 1.5 officers per 1,000 residents) and 183 fire (based on one full-time fireman per 1,000 residents) personnel will be required. The City will also need additional police and fire facilities and equipment to meet the demands of the increase in population and structures as a result of the proposed plan.

It can be argued that an increase in the density of population in an area is directly correlated to an increase in crime. The General Plan includes policies which provide for adequate police and fire protection within the Planning Area. These goals and policies are designed to reduce the impact of development on police and fire protection services. Additional measures can be imposed by the City on developers when development is proposed to provide adequate fireflow and site access. The City can also require structures be designed to incorporate crime prevention techniques.

5.3.3 Mitigation Measures

Mitigation for impacts to police and fire as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

5.3.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on police and fire services in the Planning Area are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

5.4 EMERGENCY PREPAREDNESS

The environmental setting for Emergency Preparedness is contained within Section 5.4 of the ESR portion of the General Plan document.

5.4.1 Criteria for Determining Significance

Impacts on emergency preparedness were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ interfere with emergency response or evacuation plans, or
- ▶ create a situation involving personal endangerment, or unusual risk to employees, visitors, residents, or the general public.

5.4.2 Environmental Impacts

The City currently implements its basic emergency planning and response through a mutual aid system with the County of Riverside and surrounding communities. Contained within the proposed plan are policies and implementation measures to protect the health and safety of people living, working and visiting Indio. However, certain natural hazards cannot be prevented which include earthquakes, slope failure, erosion, and floods. Buildout within the Planning Area will place people and structures in areas subject to natural hazards that have the potential to create risks to life and property.

Implementation of the proposed plan will put people and property at risk; however, policies and implementation measures contained within the emergency preparedness section of the proposed plan assure that response and recovery after a disaster occur.

5.4.3 Mitigation Measures

Mitigation for impacts to emergency preparedness as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

5.4.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on emergency preparedness in the Planning Area are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

5.5 HAZARDOUS MATERIALS

The environmental setting for Hazardous Materials is contained within Section 5.5 of the ESR portion of the General Plan document.

5.5.1 Criteria for Determining Significance

Impacts of hazardous materials were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ expose humans to hazardous materials or hazardous waste;
- ▶ generate hazardous materials or hazardous waste in quantities, or of a type which could not be accommodated by the current County collection system; or
- ▶ result in an increased likelihood of an uncontrolled release of hazardous materials which could contaminate soil, surface water, and groundwater.

5.5.2 Environmental Impacts

Implementation of the proposed plan has the potential to subject humans to common hazardous materials and hazardous waste problems similar to what currently exists in the Planning Area. The majority of hazardous materials and problems that will continue to exist will be transportation accidents on I-10, the railroad and streets within the City's jurisdiction, illegal dumping, underground storage tank leaks, leaking petroleum pipelines, commercial and industrial wastes, agricultural pesticides, and illegal drug laboratories.

Hazardous materials response and cleanup within the Planning Area is the responsibility of the City's Fire Department in conjunction with the California Department of Forestry and Fire Prevention/ Riverside County Hazardous Materials Response Team, and Caltrans and the California Highway Patrol along I-10. The City will continue to

implement its Basic Emergency Plan providing public protection from hazardous materials incidents.

5.5.3 Mitigation Measures

Mitigation for hazardous materials impacts as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

5.5.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts from hazardous materials are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

5.6 GEOLOGY AND SEISMICITY

The environmental setting for Geology and Seismicity is contained within Section 5.6 of the ESR portion of the General Plan document.

5.6.1 Criteria for Determining Significance

Impacts on geology and seismicity were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ construction as a result of the implementation of the general plan would exacerbate an existing geological hazard or create a new geologic hazard, or
- ▶ implementation of the General Plan would place people and structures in potential situations of endangerment or unreasonable risk associated with the effects of seismicity induced surface rupture, ground shaking, liquefaction, subsidence, or slope instability leading to slope failure.

5.6.2 Environmental Impacts

Landforms

Elevations within the majority of the Planning Area lie at or below sea level, except the Indio Hills located north of I-10. The Indio Hills rise 1,350 feet above the surrounding area and represent the most significant topographical feature in the Planning Area. Grading for construction of infrastructure, roadways, and buildings within the Indio Hills area may significantly alter the hills. The City is concerned with preserving the views and aesthetics of the Indio Hills. Goals and policies contained within the soils, geology, land use, and community design sections of the proposed plan require development to be sensitive to the hillsides. Incentives are provided to draw development out of the hillsides into the flatter areas south of the hills, therefore, preserving the integrity of the hills as open space.

The majority of the Indio Hills (5,912 acres) has been designated as open space with an additional 1,058 acres for mineral resource extraction. Proposed residential densities in the Indio Hills allows a maximum of one single family residential units per 40 acres. The low intensity land use in the hills will preserve the aesthetics of the hillsides, reduce the exposure of structures and human life to landslides, ground rupture, and other seismically caused hazards as discussed further below.

Seismicity

The Planning Area is located within a seismically active region of Southern California. Within the unincorporated region of the Planning Area north of the flood control berm is the San Andreas fault zone. The Banning/Mission Creek fault within the San Andreas fault zone is considered to be the most active fault system in the Coachella Valley.

The majority of the Planning Area is subject to severe ground shaking and liquefaction (see Figure 5.6-2 in the ESR). Depending on the location and intensity of an earthquake in the region, the Planning Area could be subject to considerable structural damage to buildings and infrastructure and may even experience loss of life. Buildout of the proposed plan will subject an increased population to the effects of seismically induced hazards such as ground shaking, fault rupture, liquefaction, slope instability, and subsidence in the area.

The California Uniform Building Code requires structures for human occupancy be built to certain seismic standards. Buildings built after 1957 have been subject to the code; however, the City does contain buildings that are built of unreinforced concrete which could collapse during an earthquake.

Goals and policies within the proposed plan were designed to reduce the impacts of seismically caused hazards in the Planning Area. Policies within the Emergency Preparedness section of the proposed plan will ensure the City is prepared to execute rescue measures in the event of a major earthquake in the region.

5.6.3 Mitigation Measures

Mitigation for geology and seismicity impacts as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

5.6.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts from and on geology and soils are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

5.7 FLOOD HAZARDS

The environmental setting for Flood Hazards is contained within Section 5.7 of the ESR portion of the General Plan document.

5.7.1 Determination of Significance

Impacts on flood hazards were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ improvements such as grading, construction of barriers and structures, and impervious surfacing increase and/or divert rainfall runoff and/or affect its collection, and conveyance in such a manner as to cause increased inundation, sedimentation and/or damage from water forces to the subject project and/or other properties;
- ▶ runoff mixes with wetlands habitat causing instability to the existing water quality (i.e., increase of dissolved solids, decrease of dissolved oxygen, etc.) which in turn affects the habitat;
- ▶ improvements cause an increase and/or diversion of sediments from runoff to be deposited in a wetlands area which causes a reduction in habitat; or
- ▶ channel improvements create a condition which create downstream velocities which either cause erosion of habitat areas or sedimentation.

An impact will be considered beneficial if it improves upon the criteria mentioned above (i.e., reduces flood risk).

5.7.2 Environmental Impacts

Implementation of the General Plan will result in grading and other construction activities in undeveloped and/or agricultural areas. As urban development occurs, large areas of soil will be susceptible to erosion due to wind and rain exposure. As development occurs adjacent to watercourses and within areas subject to 100-year

storm flows, the potential for flood related damages will increase. Additionally, more development will increase the amount of storm runoff flowing to the CVSWC resulting in a greater demand on the existing storm drain system.

All new construction will be required to retain stormwater runoff onsite and construct new storm drain facilities as warranted thus reducing the flood risk to downstream properties.

5.7.3 Mitigation Measures

Mitigation for impacts to flood hazards as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

5.7.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on and from flood hazards are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

5.8 AIRPORTS

The environmental setting for Airports is contained within Section 5.8 of the ESR portion of the General Plan document.

5.8.1 Criteria for Determining Significance

Impacts on airports were determined to be significant if one or more of the following conditions would result from implementation of the General Plan:

- ▶ land uses proposed in the vicinity of an airport would interfere with the operation and safety of the airport, or
- ▶ airport operation would result in a significant noise and/or safety impacts on people living and working in the vicinity of the airport.

5.8.2 Environmental Impacts

The Bermuda Dunes Airport has direct influence over existing and future land uses in the vicinity of its operations. It is anticipated as the Coachella Valley area grows and industry and businesses are attracted to the area, there will be the demand to expand airport operations and facilities. The airport is not within the direct jurisdiction of the City. Land uses within the airport influence area and airport operations are within the jurisdiction of the Riverside County Airport Commission. Goals and policies are provided within the proposed plan that will keep the lines of communication open between the City and the Commission. Both agencies will be provided the opportunity to review and comment on land use decisions made by the City and the Commission that will effect the airport and the surrounding area.

The policies also provide a land use compatibility list to guide the City in siting of land uses within the airport influence area. The siting of land uses within the influence area that are compatible with airport operations will benefit the community by reducing public safety issues of aircraft noise and overflights.

Noise impacts of the airport are addressed in Section 5.1, Noise above.

5.8.3 Mitigation Measures

Mitigation for impacts to and from airports as a result of the implementation of the General Plan are contained within the goals and policies portion of the General Plan.

5.8.4 Residual Environmental Impacts

With implementation of the described mitigation measures, impacts on and from airports are mitigated to insignificant; therefore, no significant unavoidable adverse impacts remain.

Housing

The environmental setting for Housing is contained within Section 6.0 of the ESR portion of the General Plan document.

6.1 CRITERIA FOR DETERMINING SIGNIFICANCE

Project impacts to housing are considered significant and adverse if:

- ▶ The project creates a substantial increase in regional projections of dwelling units.

6.2 ENVIRONMENTAL IMPACTS

Implementation of the proposed General Plan will result in an increase in dwelling units from the existing number of units in the Planning Area 14,958 to the anticipated amount at buildout 56,060, an increase of 41,102 units or 375 percent.

SCAG has estimated the number of households in Indio to be 16,254 in 2010. This number was not developed for the entire planning area and does not take into account the additional households outside the current corporate limits at this 1989 projection.

The changes in residential land use categories are discussed in Section 3.1 Land Use of the Environmental Impacts portion of the General Plan.

6.3 MITIGATION MEASURES

Mitigation for impacts to housing as a result of implementation of the General Plan are contained within the goals and policies and 5-year housing program portions of the General Plan. Mitigation for housing is contained within the 5-year housing program.

6.4 RESIDUAL ENVIRONMENTAL IMPACTS

The proposed General Plan will have a significant impact on housing that can be mitigated to a level of insignificant with implementation of the goals and policies of the Proposed Plan.

CUMULATIVE IMPACTS

7.1 INTRODUCTION

The CEQA defines cumulative impacts as "two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts."

The proposed General Plan has been developed not to create future growth but as a response to the anticipated growth the community foresees. In order to prepare and plan for increased growth in the area the City of Indio has developed a General Plan to guide and in some cases limit the growth that is anticipated to occur.

The Coachella Valley has experienced tremendous growth in the last few decades and to believe any community can exist in isolation of this trend is unrealistic. Indio cannot remain status quo, it must plan for the changes the future has in store instead of reacting to these changes after the fact.

Buildout of the proposed plan is difficult to pin point in time. Although General Plans usually look at a 20-year time period, total buildout does not necessarily occur within this period or ever.

7.2 ENVIRONMENTAL IMPACTS

The General Plan may facilitate growth in the Shadow Hills area by planning for infrastructure improvements that will make development possible.

Increases in commercial and industrial lands will increase employment in the area and thus increase the need for housing which as part of a cycle will in turn increase the need for commercial and industrial land uses.

The proposed project and other growth in the region could cumulatively impact the following areas: traffic, noise, air quality population, housing, biological

resources, loss of agricultural lands, water quality and quantity, public services, recreational facilities, emergency services, wastewater, solid waste, crime, and medical services.

Due to the regional level of the above impacts a deficiency of one community to meet its needs in an area will greatly affect adjacent communities, especially in reference to community services and parks.

7.3 SIGNIFICANT UNAVOIDABLE ADVERSE CUMULATIVE IMPACTS

As discussed previously in the EIR portion of the General Plan document the goals, policies, and implementation measures of the document call for the City to participate in various regional programs addressing these issues. Implementation of these goals, policies, and implementation measures were designed to mitigate significant cumulative impacts as the result of implementing the land use policies of the proposed plan.

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CEQA (Section 15126[d]) requires a full range of alternatives which can feasibly attain the objectives of the proposed action be analyzed in an EIR.

Alternatives to the Land Use Plan contained within the Alternatives Report dated December 1992, were presented to and reviewed by the City of Indio Planning Commission and City Council, and the general public. The preferred land use alternative is the proposed plan that has been analyzed for its impacts on the environment in this EIR. The alternatives presented in the report are the alternatives that are analyzed below with the exception of the "No Project" Alternative.

It is not the intent or purpose of this EIR to discuss in detail the impacts of site specific projects or alternatives. The EIR discusses the cumulative impacts that may be expected to occur if the City chooses an alternative other than the proposed plan. Alternatives are analyzed to a lesser extent than the project to give decision makers and the public the opportunity to examine the possible impacts of choosing another land use alternative to the proposed plan. The analysis also determines the environmentally superior alternative. The four alternatives that are described in further detail below are as follows:

- ▶ "No Project" Alternative
- ▶ Low Density Alternative
- ▶ Moderate Density Alternative
- ▶ High Density Alternative

All four alternatives were analyzed for impacts on the community in comparison to the proposed General Plan. Table 8.1-1 provides a summary of this comparison.

8.1 "NO PROJECT" ALTERNATIVE

With the "No Project" Alternative, the City would continue to operate under its current General Plan adopted in 1978. This update to the City's General Plan would not occur under the "No Project" Alternative. The unincorporated areas within the City's sphere-of-influence would remain under the jurisdiction of the County of Riverside and the City would not have direct control over its development. These areas would be developed under Riverside County's current General Plan. This alternative is illustrated in Figure 3.1-1 of the ESR portion of the General Plan document.

This alternative would create a more compact community with higher intensity land uses in the core and lower intensity land uses in the periphery as opposed to the increased emphasis on a balanced community in the proposed plan. The Planning Area would not be expanded to include the Shadow Hills area and would be developed under Riverside County's General Plan which preserves the Indio Hills north of the dike through the designation so Mountainous Areas, Desert Areas, and Water Resources. The Shadow Hills area is designated under the county plan as lower intensity residential and agricultural uses. The City limits would not be expanded to the north as proposed in the project. However, the County has consistently granted entitlements to applicants in unimproved areas of the Coachella Valley (i.e., Del Webb and Adams 34).

One of the main differences between this alternative and the proposed plan is the dominance of agricultural land uses. This alternative also concentrates major commercial land uses in the downtown area. Commercial and industrial land uses would be decreased from what is proposed in the project.

Table 8-1.1

ALTERNATIVES COMPARATIVE MATRIX

Issue Area	Project	No Project Alternative	Low Density Alternative	Moderate Density Alternative	High Density Alternative
Land Use	Significant but Mitigatable	Similar	Less	Similar	More
Circulation	Significant but Mitigatable	Less	Less	Less	More
Infrastructure/Public Services	Significant but Mitigatable	Less	Less	Less	More
Community Services	Significant but Mitigatable	Less	Less	Less	More
Community Design	Significant but Mitigatable	More	Similar	Similar	Similar
Economic Development	Significant but Mitigatable	More	Similar	Similar	Similar
Government	Significant but Mitigatable	More	Similar	Similar	Similar
Open Space	Significant but Mitigatable	Similar	Similar	Similar	Similar
Soils	Significant but Mitigatable	Similar	Similar	Similar	Similar
Agricultural Resources	Significant	Less	Slightly Less	Similar	Similar
Water Resources	Significant but Mitigatable	Similar	Similar	Similar	Similar
Biological Resources	Significant but Mitigatable	Similar	Similar	Similar	Similar
Energy Conservation	Significant but Mitigatable	Similar	Less	Similar	More
Mineral Resources	Significant but Mitigatable	Similar	Similar	Similar	Similar
Cultural Resources	Significant but Mitigatable	Similar	Similar	Similar	Similar
Noise	Significant but Mitigatable	Less	Slightly Less	Slightly Less	Slightly More
Air Quality	Significant	Less	Slightly Less	Slightly Less	Slightly More
Police and Fire Services	Significant but Mitigatable	Less	Less	Slightly Less	More
Emergency Preparedness	Significant but Mitigatable	Similar	Similar	Similar	Similar
Hazardous Materials	Significant but Mitigatable	Similar	Similar	Similar	Similar
Geology and Seismicity	Significant but Mitigatable	Similar	Similar	Similar	Similar
Flood Hazards	Significant but Mitigatable	Similar	Similar	Similar	Similar
Airports	Significant but Mitigatable	Similar	Similar	Similar	Similar
Housing	Significant but Mitigatable	Similar	Similar	Similar	More

Note: The shaded areas represent impacts that are less to slightly less than those impacts of the proposed plan. The alternative with the greatest number of shaded areas was determined to be the 'Environmentally Superior Alternative.'

The range of residential land use designations is much broader within the City in this alternative than the proposed plan, with higher densities allowed than with the proposed plan. The high density residential land use designation in this alternative allows for a much higher intensity use with up to 34 dwelling units per acre. The highest residential designation in the proposed plan is 12 dwelling units per acre.

The community resulting through the buildout of this alternative would be characterized by the following:

- ▶ preservation of agricultural land uses remain a dominant feature of the community;
- ▶ maintenance the semi-rural character of the community north of I-10 and low intensity residential and agricultural uses making up the outlying area of the City;
- ▶ concentration of commercial land uses in the downtown core area - the central core of the community comprises the majority of commercial land uses, with strip commercial areas along Highway 111;
- ▶ limited amounts of commercial and industrial land uses - industrial land uses are located along East Valley Parkway and I-10, with major commercial located in core areas, and
- ▶ continuation of land use conflicts - between the City's General Plan and the County's General Plan.

8.1.1 Environmental Impacts

Implementation of the "No Project" alternative creates similar impacts as the proposed plan except in the area of agriculture lands. The overall land use intensity is similar to the proposed plan. However, the core area would be more intensely developed in this alternative and conversely the peripheral areas would be developed at lower intensities than the proposed plan. Therefore, impacts to biology, wildlife, community services, and infrastructure would be similar.

The use of agriculture would continue under this alternative which would reduce impacts regarding

loss of agricultural lands. However, the continuation of agricultural production in an increasingly urban area creates many problems in and of itself. Land use conflicts are created by the proximity of agricultural uses to residential uses, which are proposed in this alternative.

The following is a summary of the impacts of the "No Project" Alternative in comparison to the proposed General Plan.

- ▶ **Land Use** - The overall land use intensity with the "No Project" Alternative is similar to that of the proposed General Plan. However, the core area of the City would be more intensely developed with commercial land uses with this alternative. The peripheral area would be developed at lower intensities than with the proposed plan. The semi-rural character that currently exists north of I-10 would be retained; however, Riverside County has recently amended its General Plan land use diagram to allow more intensive types of urban uses in this area. (i.e. Del Webb's Sun City and Adams 34).

Level of impact as compared to the proposed plan: Similar

- ▶ **Circulation** - Because this alternative would develop at less intensities than the proposed plan, traffic generation would be less and the need for roadway improvements within the City would be reduced. However, as stated under land use, Riverside County has approved two large specific plans north of I-10. Traffic generated from these projects will necessitate roadway improvements to Washington and Adams Streets introducing urban circulation patterns into an area characterized by a semi-rural environment.

Level of impact as compared to the proposed plan: Less

- ▶ **Infrastructure/Public Services** - The need to improve and extend water and sewer service and drainage facilities to developing areas will remain the same as those of the proposed general plan. As these needs will be less intense, improvements to services will be less with the reduced commercial and residential

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growth anticipated with this alternative. As with the proposed plan there will not be a significant impact on natural gas, electricity, telephone, telecommunications, and cable television.

Level of impact as compared to the proposed plan: Less

- **Community Services** - The need for community services such as schools, libraries, and health care facilities will be less with this alternative. These services are driven by population. As population in an area increases the need for these services increases. Since the population of the City is anticipated to be less with this alternative the need to for the community to provide these services will be less. Currently, the Planning Area does not meet its needs for parks (52 acres or parks for a 1992 population of 42,099 - state requires 3 acres per 1,000 people or 145.35 acres). With this alternative the need to provide parks and recreations facilities will remain as it does with the proposed plan.

Level of impact as compared to the proposed plan: Less

- **Community Design** - Presently, the City does not have and is not implementing a design theme or guidelines for development in the City. Architectural designs are reviewed by the Planning Commission and in some cases the City Council prior to approval. The proposed plan provides design direction; therefore, this alternative will have a greater impact on community design than the proposed plan.

Level of impact as compared to the proposed plan: More

- **Economic Development** - This alternative provides for limited commercial and industrial development along East Valley Parkway, Highway 111 and I-10, with major commercial land uses in the central core of the City. The proposed plan provides a 249 percent increase in commercial and 352 percent increase in industrial land uses. The increased tax base provided by the proposed plan will increase revenue for the City to provide needed community services. Increase in commercial

and industrial land uses will provide employment for the area residents with the proposed plan which would not be realized with this alternative.

Level of impact as compared to the proposed plan: More

- **Government** - The City does not presently have a guideline of the community's governmental structure and procedures. The proposed plan provides a section discussing and formalizing future structure and procedures to clarify the system to the public. This alternative will have a greater impact on government since no guidelines would be formulated.

Level of impact as compared to the proposed plan: More

- **Open Space** - This alternative would preserve the areas adjacent to the Indio Hills as open space under Riverside County's current General Plan through the designations of Desert and Mountainous areas. The proposed plan also preserves these areas with limited development allowed. Open space designations between the proposed plan and the City's existing General Plan are relatively the same and no differences in impacts are anticipated.

Level of impact as compared to the proposed plan: Similar

- **Soils** - Similar areas of the planning area would be developed under this alternative as with the proposed plan. The areas adjacent to the Indio Hills will be preserved in both the proposed plan and this alternative. Some areas will be developed at lesser or greater intensities, however, overall grading of sites will be similar and therefore have similar impacts on soils.

Level of impact as compared to the proposed plan: Similar

- **Agricultural Resources** - This alternative would allow the continuation of agricultural land uses in areas that have been designated as agriculture on the City's and County's General Plan Land Use diagrams. The proposed plan does not designate lands for agricultural uses in the Planning Area, which will eventually eliminate

6,577 acres of prime agricultural soils. This is a significant impact of the proposed plan that can not be mitigated to insignificant. This alternative would have a lesser impact on agricultural than the proposed plan. It should be noted, the County has approved two large specific plans on prime agricultural soils north of I-10 introducing significant urban intrusion in the area.

Level of impact as compared to the proposed plan: Less

- ▶ **Water Resources** - This alternative proposes similar areas for development and for open space as the proposed plan, therefore, impacts on groundwater would be similar. An increase in development in both this alternative and the proposed plan; will have similar impacts on both groundwater resources and water quality.

Level of impact as compared to the proposed plan: Similar

- ▶ **Biological Resources** - The conversion of undeveloped portions of land to more urban uses will remain the same as those of the proposed plan. The vast majority of sensitive plant and animal communities are found in areas that will remain as open space under this alternative and the proposed plan. As with the proposed plan increased development under this alternative will create similar impacts to plant and animal communities due to an overall reduction of habitat.

Level of impact as compared to the proposed plan: Similar

- ▶ **Energy Conservation** - Land development under this alternative will create similar additional demands on existing energy sources as will the proposed plan, resulting in a loss of nonrenewable resources.

Level of impact as compared to the proposed plan: Similar

- ▶ **Mineral Resources** - This alternative provides for the continued extraction of mineral resources in designated areas adjacent to the Indio Hills. The proposed plan designates these areas at the north of the planning area for Resource

Recovery to allow for continued extraction. Impacts to mineral resources are similar in both this alternative and the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Cultural Resources** - Cultural resources will experience similar impacts with this alternative as with the proposed plan. Lands to be developed are located in similar areas and will require similar grading activities. The risk of disturbing cultural resource areas is the same for this alternative and the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Noise** - This alternative will experience increases in ambient noise levels due to increased development resulting in an overall increase in motor vehicle traffic. This alternative will experience less impacts to noise due to decreased intensity of development in the northern portions of the planning area. The proposed plan would expose these areas to increased noise levels, due to increased vehicular traffic and urban development. Impacts on noise for this alternative are less than those anticipated for the proposed plan.

Level of impact as compared to the proposed plan: Less

- ▶ **Air Quality** - Impacts on air quality would be less in this alternative due to decreased intensity of development proposed in the Shadow Hills area under the County's existing general plan. The number of acres to be developed under this alternative are similar to the proposed plan; however, intensities of development are decreased in the Shadow Hills area and would therefore decrease the amount of traffic produced under the proposed plan. This alternative would experience similar fugitive dust emissions during development. Less impacts to air quality are anticipated with this alternative.

Level of impact as compared to the proposed plan: Less

- ▶ **Police and Fire Services** - Increased development under this alternative will create additional burdens on police and fire services within the community. However, impacts will be less under this alternative due the fact that the planning area will not be expanded to include areas currently under the county's control. These areas will be served by the county as opposed to the City in the proposed plan. Impact to police and fire services would be decreased under this alternative.

Level of impact as compared to the proposed plan: Less

- ▶ **Emergency Preparedness** - This alternative will result in the same likelihood of natural hazards occurring, including earthquakes, slope failure, erosion, floods, and wildfires. Proposed development under this alternative would put additional populations at risk, similarly to the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Hazardous Materials** - The implementation of the No Project Alternative has the potential to subject humans to common hazardous materials waste problems similar to what would result with the proposed plan. Increased population resulting from development of currently undeveloped lands will put more persons at risk and increase the potential for hazardous wastes.

Level of impact as compared to the proposed plan: Similar

- ▶ **Geology and Seismicity** - The "No Project" Alternative would have similar impacts on geology and seismicity. Dangers to the population relating to geology and seismic hazards would be the same as with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Flood Hazards** - Impacts on flood hazards would be similar to the proposed plan. As development occurs infrastructure will be built to protect structures and down stream properties which will occur with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Airports** - Land uses in the airport influence area under this alternative are the same as with the proposed plan. Impacts from overflights will remain the same as with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Housing** - Implementation of this alternative will result in an increase in dwelling units similar to that of the proposed plan. This alternative concentrated higher residential land use densities in the core area with low density surrounding this area. The plan proposes a more even distribution of residential densities throughout the planning area. This alternative would result in similar impacts to housing.

Level of impact as compared to the proposed plan: Similar

8.2 LOW DENSITY ALTERNATIVE

The major change between this alternative and the proposed plan would occur in the Shadow Hills planning subarea. In this subarea, commercial and residential land and densities have been greatly reduced. Certain areas in the northern end of the subarea have been changed to rural densities of ½ acre to 1 acre lots. The pattern for development for the remaining parts of the City would essentially be low density residential in character.

This alternative plan proposes the least intensive level of future development in the City's planning area. This alternative is illustrated on Figure 8.2-1. For ease of comparison, only those areas that change from the proposed plan have been colored, with the unchanged areas remaining white.

The major changes in this alternative occur in the Shadow Hills planning subarea. In this subarea, residential and commercial land and densities have been greatly reduced. Some of the areas in the northern end of the subarea have been changed to rural densities of ½ acre or 1 acre lots. RL designations have also replaced Regional and Community Commercial designations along the freeway near Jefferson. The Mixed Use north of Avenue 42 has been changed to RL, removing the commercial component, and the existing agricultural uses north of Avenue 40 have been preserved. In the South Indio subarea, the area between Avenue 49 and Avenue 48 has also been changed to rural densities of ½ acre lots.

Required yard setbacks, allowable lot coverage, onsite landscaping requirements, provisions for project amenities to be located onsite (i.e., recreational activity centers) and open space reservations are to be maintained at levels which will have the effect of restricting the maximum level of development allowed.

With this alternative there would be a estimated population of 80,188 people and 25,784 dwelling units at build-out.

The physical results of this plan alternate will be to provide a future community which has the following characteristics:

- ▶ maintenance of a semirural character for the community;
- ▶ limitation of required infrastructure improvements;
- ▶ population levels would be lesser than more intensive development plan scenarios;
- ▶ circulation improvements would result in fewer new streets and highways being constructed, and also lesser development standards, (i.e., width and number of traffic lanes), for required new streets and highways; and
- ▶ reduced sales tax revenues from lower commercial square footage.

The pattern of development proposed for the remaining parts of the City would be essentially low density residential in character. Intensive commercial areas are proposed in target areas only, with limited provision of neighborhood commercial centers. The location of Residential High uses correspond closely to existing development of high density projects. New areas forecast for multiple-family residential development are either target sites for assisted housing projects, (i.e., Coachella Valley Housing Coalition projects), or in areas designated for Residential Medium development which are served by transit facilities, close to support commercial facilities and close to employment centers and parks.

8.2.1 Environmental Impacts

Environmental impacts of the Low Density Alternative are expected to be less than with proposed land use plan. As explained above this alternative would have a less intense development patten which would result in a lower population and commercial land uses. The Low Density Alternative is the environmentally superior alternative. This alternative reduces the proposed plan's significant impacts on agricultural land uses.

The following is a summary of the impacts of the Low Density Alternative in comparison to the proposed General Plan.

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- **Land Use** - The overall land use intensity is similar to that of the proposed General Plan. However, the densities of residential land uses will be less through the reduction in overall residential densities. The semi-rural character that currently exists north of I-10 not would be retained which is similar to the proposed plan.

Level of impact as compared to the proposed plan: Less

- **Circulation** - Impacts of circulation with this alternative would be slightly less than with the proposed plan. Roadway improvements would be necessary to facilitate traffic anticipated to be generated with this alternative; however, they will be less.

Level of impact as compared to the proposed plan: Less

- **Infrastructure/Public Services** - Impacts to infrastructure such as water and wastewater will be slightly less with the Lower Density Alternative than with the proposed plan because of population decrease of 94,168 people. With an estimated lower population the need for those services will be less.

Level of impact as compared to the proposed plan: Less

- **Community Services** - Impacts to community services such as schools, recreational facilities, and health care services will be less with this alternative. The need for additional parks will remain with this alternative. Currently, the City does not have adequate park space to accommodate its population. The need for additional acreage for parks will decrease from an estimated 523 acres with the proposed plan to 281 acres with this alternative. The addition of any population without providing for parks would be a significant impact of this alternative.

Level of impact as compared to the proposed plan: Less

- **Community Design** - As with the proposed plan this alternative would provide community design direction which is not currently implemented; therefore, this alternative will have a similar

impact on community design as the proposed plan.

Level of impact as compared to the proposed plan: Similar

- **Economic Development** - This alternative provides for commercial and industrial development along East Valley Parkway, Highway 111 and I-10, with major commercial land uses in the central core of the City and north of I-10 in the Shadow Hills area. As with the proposed plan this alternative would provide an increase in commercial and industrial land uses. The increased tax base provided by the proposed plan will increase revenue for the City to provide needed community services. Increase in commercial and industrial land uses will provide employment for the area residents with the proposed plan which would not be realized with this alternative.

Level of impact as compared to the proposed plan: Similar

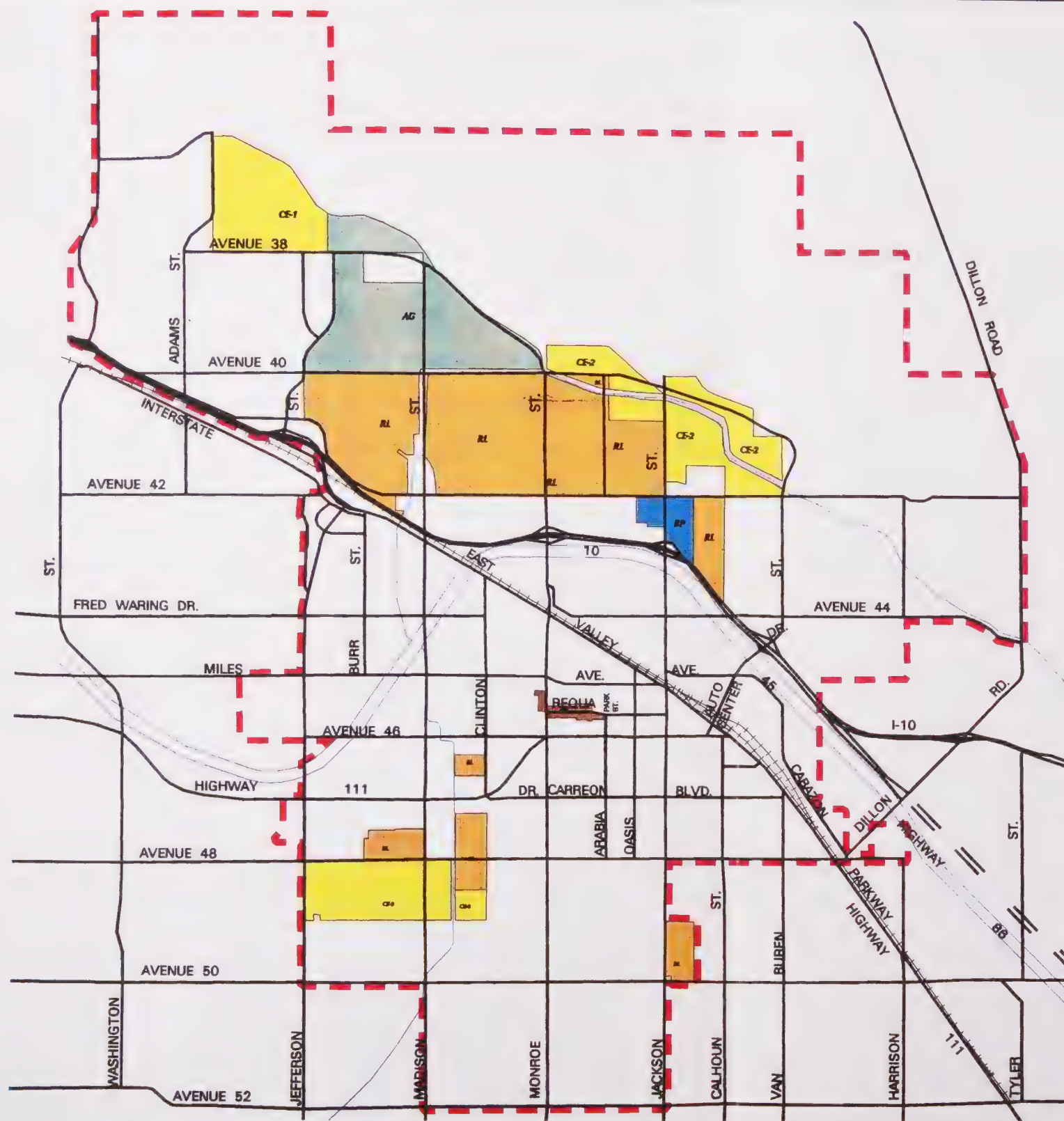
- **Government** - The City does not presently have a guideline of the community's governmental structure and procedures. As with the proposed plan this alternative provides a section discussing and formalizing future structure and procedures to clarify the system to the public.

Level of impact as compared to the proposed plan: Similar

- **Open Space** - This alternative as with the proposed plan would preserve the areas of the Indio Hills as open space with limited development allowed. Open space designations between this alternative and the City's existing General Plan are relatively the same and no differences in impacts are anticipated.

Level of impact as compared to the proposed plan: Similar

- **Soils** - Similar areas of the Planning Area would be developed under this alternative as with the proposed plan. The areas adjacent to the Indio Hills will be preserved in both the proposed plan and this alternative. Some areas will be developed at lesser or greater intensities;



Land Use Districts

- Hillside Estates HE
- Country Estates CE
- Low Density Residential RL
- Medium Density Residential RM
- High Density Residential RH
- Neighborhood Commercial NC
- Community Commercial CC
- Regional Commercial RC
- Tourist Commercial CT
- Commercial Office CO
- Business Park BP
- Industrial Park IP
- Manufacturing M
- Quasi-Public QP
- Public Schools PS
- Other Public Facilities P
- Agriculture AG
- Golf Course GC
- Open Space OS
- Parks PR
- Resource Recovery RR
- Village Core VC
- Mixed Use MU
- Specific Plan Areas SP

Figure 8.2-1
LOW DENSITY ALTERNATIVE



Chambers Group, Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



1" = 6000'



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however, overall grading of sites will be similar and therefore have similar impacts on soils.

Level of impact as compared to the proposed plan: Similar

- ▶ **Agricultural Resources** - This alternative would allow the continuation of agricultural land uses in areas north of Avenue 40, east of Jefferson Avenue in the north Planning Area. This alternative designates lands for agricultural uses in the Planning Area; however, there would still be a significant impact to prime agricultural soils. This alternative would have a similar but lesser impact on agricultural as the proposed plan. It should be noted, the County has approved two large specific plans on prime agricultural soils north of I-10 introducing significant urban intrusion in the area.

Level of impact as compared to the proposed plan: Slightly Less

- ▶ **Water Resources** - This alternative proposes similar areas for development and for open space as the proposed plan, therefore, impacts on groundwater would be similar. An increase in development in both this alternative and the proposed plan will have similar impacts on both groundwater resources and water quality.

Level of impact as compared to the proposed plan: Similar

- ▶ **Biological Resources** - The conversion of undeveloped portions of land to more urban uses will remain the same as those of the proposed plan. The vast majority of sensitive plant and animal communities are found in areas that will remain as open space under this alternative and the proposed plan. As with the proposed plan increased development under this alternative will create similar impacts to plant and animal communities due to an overall reduction of habitat.

Level of impact as compared to the proposed plan: Similar

- ▶ **Energy Conservation** - Increased land development under this alternative will create similar additional demands on existing energy

sources as will the proposed plan, resulting in a loss of nonrenewable resources. The need for electricity, petroleum products, and natural gas will be reduced because of a reduced population.

Level of impact as compared to the proposed plan: Less

- ▶ **Mineral Resources** - This alternative provides for the continued extraction of mineral resources in designated areas adjacent to the Indio Hills. The proposed plan designates these areas in the northern Planning Area for Resource Recovery to allow for continued extraction. Impacts to mineral resources are similar in both this alternative and the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Cultural Resources** - Cultural resources will experience similar impacts with this alternative as with the proposed plan. Lands to be developed are located in similar areas and will require similar grading activities. The risk of disturbing cultural resource areas is the same for this alternative and the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Noise** - This alternative will experience increases in ambient noise levels due to increased development resulting in an overall increase in motor vehicle traffic. This alternative will experience less impacts to noise due to decreased intensity of development in the northern and southern portions of the Planning Area. The proposed plan would expose these areas to increased noise levels, due to increased vehicular traffic and urban development. Impacts on noise for this alternative are slightly less than those anticipated for the proposed plan.

Level of impact as compared to the proposed plan: Slightly Less

- ▶ **Air Quality** - Impacts on air quality would be less in this alternative due to decreased intensity of development proposed in the Shadow Hills

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area and southern Planning Area. The number of acres to be developed under this alternative are similar to the proposed plan; however, intensities of development are decreased in the Shadow Hills area and would therefore decrease the amount of traffic produced under the proposed plan. This alternative would experience similar fugitive dust emissions during development. Impacts to air quality are anticipated to be slightly less with this alternative.

Level of impact as compared to the proposed plan: Slightly Less

- ▶ **Police and Fire Services** - Increased development under this alternative will create additional burdens on police and fire services within the community. An anticipated 261 police officers will be required with the implementation of the proposed plan and 120 with this alternative. The same acreage will be served with this alternative as with the proposed plan. Impact to police and fire services would be decreased under this alternative.

Level of impact as compared to the proposed plan: Less

- ▶ **Emergency Preparedness** - This alternative will result in the same likelihood of natural hazards occurring, including earthquakes, slope failure, erosion, floods, and wildfires. Proposed development under this alternative would put additional populations at risk, similarly to the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Hazardous Materials** - The implementation of the Low Density Alternative has the potential to subject humans to common hazardous materials waste problems similar to what would result with the proposed plan. Increased population resulting from development of currently undeveloped lands will put more persons at risk and increase the potential for hazardous wastes.

Level of impact as compared to the proposed plan: Similar

- ▶ **Geology and Seismicity** - The Low Density Alternative would have similar impacts on geology and seismicity. Dangers to the population relating to geology and seismic hazards would be the same as with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Flood Hazards** - Impacts on flood hazards would be similar to the proposed plan. As development occurs infrastructure will be built to protect structures and down stream properties which will occur with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Airports** - Land uses in the airport influence area under this alternative are the same as with the proposed plan. Impacts from overflights will remain the same as with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Housing** - Implementation of this alternative will result in an increase in dwelling units similar to that of the proposed plan (56,060 with the proposed plan and 25,784 with the Low Density Alternative). As with the proposed plan this alternative proposes a more even distribution of residential densities throughout the Planning Area. This alternative would result in similar impacts to housing.

Level of impact as compared to the proposed plan: Similar

8.3 MODERATE DENSITY ALTERNATIVE

This plan alternative represents what might be described as a "moderate" version of the basic plan scenarios (see Figure 8.3-1). It has been developed with extensive input from community leaders and City staff through interviews, and with direct public input through a series of community public meetings. The objectives of this plan alternative are to recognize existing patterns of land use, to carefully analyze land use potentials and economic development opportunities, review potentials against natural as well as manmade constraints, and to set forth a balanced plan for the orderly growth and development of the City of Indio.

This plan proposes a variety of land uses, each located in careful consideration of its effects on surrounding land uses, as well as long-range development opportunities.

This alternative differs from the proposed plan because the overlay districts in the proposed plan would not be a part of the Moderate Density Alternative. This alternative is actually the proposed plan at a low end buildout. With the proposed plan the buildout population is estimated at 174,356. With the Moderate Density Alternative the buildout population is estimated at 145,304. Dwelling units are estimated at 56,060 with the proposed plan and 46,720 with the Moderate Density Alternative. The overlay districts proposed in the preferred plan allow increases in density over the underlying general plan land use designation as long as a variety of amenities are provided such as golf courses, trails, recreation centers, etc. The Moderate Density Alternative would implement the underlying General Plan land use designation only.

8.3.1 Environmental Impacts

Environmental impacts of the Moderate Density Alternative are expected to be slightly less than with the proposed land use plan. As explained above this alternative would have a less intense development pattern which would result in a lower population. The following is a summary of the impacts of the Moderate Density Alternative in comparison to the proposed General Plan.

- ▶ **Land Use** - The overall land use intensity is similar to that of the proposed General Plan. However, the densities of residential land uses will be less through the elimination of the overlay zones. The semi-rural character that currently exists north of I-10 not would be retained which is similar to the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Circulation** - Impacts of circulation with this alternative would be slightly less than with the proposed plan. Similar roadway improvements would be necessary to facilitate traffic anticipated to be generated with this alternative. It would still be necessary to build the over crossing at the I-10 freeway and Madison Street.

Level of impact as compared to the proposed plan: Less

- ▶ **Infrastructure/Public Services** - Impacts to infrastructure such as water and wastewater will be slightly less with the Lower Density Alternative than with the proposed plan because of population decrease of 29,052 people. With an estimated lower population the need for those services will be slightly less. No significant environmental impacts would occur under the proposed plan to telephone, cable T.B., natural gas, or electricity. All purveyors indicated that their services can be provided.

Level of impact as compared to the proposed plan: Less

- ▶ **Community Services** - Impacts to community services such as schools, recreational facilities, and health care services will be similar to slightly less with this alternative. The need for additional parks will remain with this alternative. Currently, the City does not have adequate park space to accommodate its population. The need for additional acreage for parks will decrease also from an estimated 523 acres with the proposed plan to 436 acres with this alternative.

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The addition of any population without providing for parks would be a significant impact of this alternative.

Level of impact as compared to the proposed plan: Less

- ▶ **Community Design** - As with the proposed plan this alternative would provide community design direction which is not currently implemented; therefore, this alternative will have a similar impact on community design as the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Economic Development** - This alternative provides for commercial and industrial development along East Valley Parkway, Highway 111 and I-10, with major commercial land uses in the central core of the City and north of I-10 in the Shadow Hills area. As with the proposed plan this alternative would provide a 249 percent increase in commercial and 352 percent increase in industrial land uses. The increased tax base provided by the proposed plan will increase revenue for the City to provide needed community services. Increase in commercial and industrial land uses will provide employment for the area residents with the proposed plan with this alternative.

Level of impact as compared to the proposed plan: Similar

- ▶ **Government** - The City does not presently have a guideline of the community's governmental structure and procedures. As with the proposed plan this alternative provides a section discussing and formalizing future structure and procedures to clarify the system to the public.

Level of impact as compared to the proposed plan: Similar

- ▶ **Open Space** - This alternative as with the proposed plan would preserve the areas of the Indio Hills as open space with limited development allowed. Open space designations between this alternative and the City's existing

General Plan are relatively the same and no differences in impacts are anticipated.

Level of impact as compared to the proposed plan: Similar

- ▶ **Soils** - Similar areas of the planning area would be developed under this alternative as with the proposed plan. The areas adjacent to the Indio Hills will be preserved in both the proposed plan and this alternative. Some areas will be developed at lesser or greater intensities, however, overall grading of sites will be similar and therefore have similar impacts on soils.

Level of impact as compared to the proposed plan: Similar

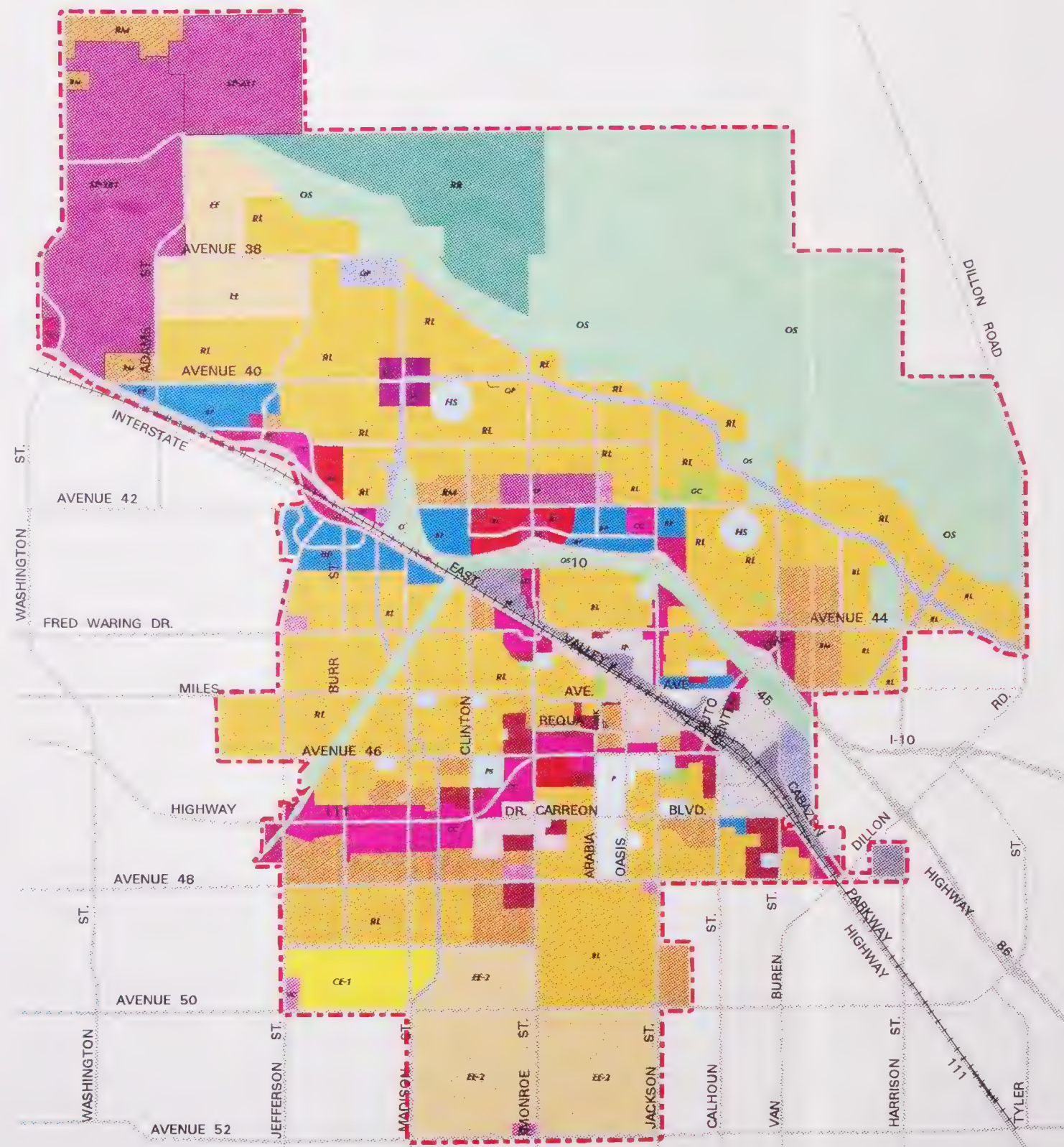
- ▶ **Agricultural Resources** - This alternative would not allow the continuation of agricultural land uses in areas that have been designated as agriculture on the City's and County's General Plan Land Use diagrams. The proposed plan does not designate lands for agricultural uses in the Planning Area, which will eventually eliminate 6,577 acres of prime agricultural soils. This is a significant impact of the proposed plan and this alternative that can not be mitigated to insignificant. This alternative would have a similar impact on agricultural as the proposed plan. It should be noted, the County has approved two large specific plans on prime agricultural soils north of I-10 introducing significant urban intrusion in the area.

Level of impact as compared to the proposed plan: Similar

- ▶ **Water Resources** - This alternative proposes similar areas for development and for open space as the proposed plan; therefore, impacts on groundwater would be similar. An increase in development in both this alternative and the proposed plan will have similar impacts on both groundwater resources and water quality.

Level of impact as compared to the proposed plan: Similar

- ▶ **Biological Resources** - The conversion of undeveloped portions of land to more urban uses will remain the same as those of the



Land Use Designations

- Equestrian Estates EE
- Country Estates CE
- Low Density Residential RL
- Medium Density Residential RM
- High Density Residential RH

- Neighborhood Commercial NC
- Community Commercial CC
- Downtown Commerce DC
- Regional Commercial RC
- Service Commercial SC
- Commercial Office CO


- Business Park BP
- Industrial Park IP
- Manufacturing M

- Quasi-Public QP
- Public Schools PS
- Other Public Facilities P

- Golf Course GC
- Open Space OS
- Parks PR
- Resource Recovery RR

- Village Core VC
- Specific Plan Areas SP

Figure 8.3-1
MODERATE DENSITY ALTERNATIVE

 **Chambers Group, Inc.**
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Zeiser Geotechnical



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proposed plan. The vast majority of sensitive plant and animal communities are found in areas that will remain as open space under this alternative and the proposed plan. As with the proposed plan increased development under this alternative will create similar impacts to plant and animal communities due to an overall reduction of habitat.

Level of impact as compared to the proposed plan: Similar

- ▶ **Energy Conservation** - Increased land development under this alternative will create similar additional demands on existing energy sources as will the proposed plan, resulting in a loss of nonrenewable resources. The need for electricity, petroleum products, and natural gas will be reduced because of a reduced population; however, the reduction will not be significant.

Level of impact as compared to the proposed plan: Similar

- ▶ **Mineral Resources** - This alternative provides for the continued extraction of mineral resources in designated areas adjacent to the Indio Hills. The proposed plan and this alternative designates these areas in the northern planning area for Resource Recovery to allow for continued extraction. Impacts to mineral resources are similar in both this alternative and the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Cultural Resources** - Cultural resources will experience similar impacts with this alternative as with the proposed plan. Lands to be developed are located in similar areas and will require similar grading activities. The risk of disturbing cultural resource areas is the same for this alternative and the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Noise** - Ambient noise levels from the addition of vehicles on the roadways as a result of this alternative would have similar impacts as with

the proposed plan. The number of vehicles will be reduced slightly over that with the proposed plan; however, the majority of planning area is currently subjected to noise at and above 60 CNEL and noise reduction measures will needed to be included as a condition of approval on most residential developments. Impacts on noise for this alternative are slightly less than those anticipated for the proposed plan.

Level of impact as compared to the proposed plan: Slightly Less

- ▶ **Air Quality** - Impacts on air quality would be less in this alternative due to decreased intensity of development proposed in the Shadow Hills area and southern Planning Area. The number of acres to be developed under this alternative are similar to the proposed plan, however, intensities of development are decreased in the Shadow Hills area and would therefore decrease the amount of traffic produced under the proposed plan. This alternative would experience similar fugitive dust emissions during development. Impacts to air quality are anticipated to be slightly less with this alternative.

Level of impact as compared to the proposed plan: Slightly Less

- ▶ **Police and Fire Services** - Increased development under this alternative will create additional burdens on police and fire services within the community. An anticipated 261 police officers will be required with the implementation of the proposed plan and 218 with this alternative. The same acreage will be served with this alternative as with the proposed plan. Impact to police and fire services would be slightly decreased under this alternative.

Level of impact as compared to the proposed plan: Slightly Less

- ▶ **Emergency Preparedness** - This alternative will result in the same likelihood of natural hazards occurring, including earthquakes, slope failure, erosion, floods, and wildfires. Proposed development under this alternative would put

additional populations at risk, similarly to the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Hazardous Materials** - The implementation of the Moderate Density Alternative has the potential to subject humans to common hazardous materials waste problems similar to what would result with the proposed plan. Increased population resulting from development of currently undeveloped lands will put more persons at risk and increase the potential for hazardous wastes.

Level of impact as compared to the proposed plan: Similar

- ▶ **Geology and Seismicity** - The Moderate Density Alternative would have similar impacts on geology and seismicity. Dangers to the population relating to geology and seismic hazards would be the same as with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Flood Hazards** - Impacts on flood hazards would be similar to the proposed plan. As development occurs infrastructure will be built to protect structures and down stream properties which will occur with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Airports** - Land uses in the airport influence area under this alternative are the same as with the proposed plan. Impacts from overflights will remain the same as with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Housing** - Implementation of this alternative will result in an increase in dwelling units similar to that of the proposed plan (56,060 with the proposed plan and 46,720 with the Moderate Density Alternative). As with the proposed plan this alternative proposes a more even

distribution of residential densities throughout the Planning Area. This alternative would result in similar impacts to housing.

Level of impact as compared to the proposed plan: Similar

8.4 HIGH DENSITY ALTERNATIVE

This alternative plan proposes the most intensive level of future development in the City's Planning Area. This alternative is illustrated on Figure 8.4-1. As with the Low Density Alternative, only those areas which change from the proposed plan have been colored, with the unchanged areas remaining white.

As stated above, this plan proposes the most intensive level of future development for the Planning Area. Densities, buildable area, and required development standards would all be designed to effect a maximum intensity for all properties within the Planning Area, whether currently undeveloped or available for redevelopment. Recommended land use designations in this plan alternative reflect the most intensive land use designations.

Changes from the proposed plan include the designation of more lands for Residential Medium and High, and Regional Commercial. This alternative also increases the densities in the Indio Ranchos area. The area bounded by Monroe and Jackson Streets and Avenues 50 and 52 has been designated as RL in this alternative. An RPD overlay would also be used on this site to achieve a master planned community in this area.

This plan alternative proposes not only more intensive land use designations throughout the Planning Area, it also sets forth the set of least restrictive development standards to apply to future development. Yard setbacks, ranges of allowed uses, requirements for off-street parking and loading, amount of onsite landscaping to be required and floor area ratios are designed to maximize the level of development allowed by this alternative.

The physical results of this plan on the future of Indio would be an intensification of land use densities. Residential units, as well as the future maximum population level of the City would be greatly increased under this alternate plan scenario. The community resulting from adoption of this alternative would be characterized by the following:

- Fundamental change in the type of character of the community from a relatively low intensity residential/agricultural area to that of a more

intensively developed community comprised of high and medium density residential land areas, and intensive commercial uses located along I-10 and Highway 111.

- Open space land would be concentrated in developed parks. Little provision of open space areas would be required within individual projects, forcing reliance instead on the development of public parks and other recreational facilities.
- The ultimate population allowed by this alternative would represent a level approximating the highest population by various residential classifications. Greater emphasis would be placed on the provision of high and medium density residential land use designations.
- All forms of public and private infrastructure improvements would be required at intensive levels to sustain the development of this alternative scenario. Circulation improvements would produce many new streets and highways, resulting in new multi-lane roadways, as well as also requiring widening and other improvements to bridges, water and sewer facilities, as well as additional police and fire safety facilities and manpower.

The adoption of this alternative plan as shown would result in a dramatic transformation of the current character of the community. If planned properly, this alternative plan would not result in a degradation in the quality of life found in the community, although it would modify the City's lifestyle. This development intensity may make necessary use of planning tools like growth management, infrastructure phasing and capital improvement planning at enhanced levels, and other steps to enable the City to provide needed services and facilities to a growing population.

This alternative proposes the most intensive level of future development for the Planning Area with a population estimate of 243,941 and 78,437 dwelling units at build-out. This alternative would also set forth the least restrictive development standards to apply to future development. The physical results of this alternative on the future of Indio would be an intensification of land use densities. Residential units, as well as the future maximum population level

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of the City would be greatly increased under this alternative.

8.4.1 Environmental Impacts

Environmental impacts of the High Density Alternative are expected to be greater than with the proposed land use plan. As explained above this alternative would have a greater intensity development pattern which would result in a higher population.

The following is a summary of the impacts of the High Density Alternative in comparison to the proposed General Plan.

- ▶ **Land Use** - The overall land use intensity is greater to that of the proposed General Plan. The densities of residential land uses will be greater. The semi-rural character that currently exists north of I-10 would not be retained which is similar to the proposed plan.

Level of impact as compared to the proposed plan: More

- ▶ **Circulation** - Impacts on circulation with this alternative would be greater than with the proposed plan due to an increase in residential densities. As with the proposed plan would be necessary to build the overcrossing at the I-10 freeway and Madison Street and other roadway improvements.

Level of impact as compared to the proposed plan: More

- ▶ **Infrastructure/Public Services** - Impacts to infrastructure such as water and wastewater will be greater with the High Density alternative than with the proposed plan. With an estimated higher population the need for those services will be greater. No significant environmental impacts would occur under the proposed plan to telephone, cable T.V., natural gas, or electricity. All purveyors indicated that their services can be provided. Impacts of the High Density

Alternative would be the greater than with the proposed plan.

Level of impact as compared to the proposed plan: More

- ▶ **Community Services** - Impacts to community services such as schools, recreational facilities, and health care services will be greater with this alternative. The need for 854 acres of parks will remain with this alternative. Currently, the City does not have adequate park space to accommodate its population. The addition of any population without providing for parks would be a significant impact of this alternative.

Level of impact as compared to the proposed plan: More

- ▶ **Community Design** - As with the proposed plan this alternative would provide community design direction which is not currently implemented; therefore, this alternative will have a similar impact on community design as the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Economic Development** - This alternative provides for commercial and industrial development along East Valley Parkway, Highway 111 and I-10, with major commercial land uses in the central core of the City and north of I-10 in the Shadow Hills area. As with the proposed plan this alternative would provide a 249 percent increase in commercial and 352 percent increase in industrial land uses. The increased tax base provided by the proposed plan will increase revenue for the City to provide needed community services. Increase in commercial and industrial land uses will provide employment for the area residents with the proposed plan which would be similar with this alternative.

Level of impact as compared to the proposed plan: Similar



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- ▶ **Government** - The City does not presently have a guideline of the community's governmental structure and procedures. As with the proposed plan this alternative provides a section discussing and formalizing future structure and procedures to clarify the system to the public.

Level of impact as compared to the proposed plan: Similar

- ▶ **Open Space** - This alternative as with the proposed plan would preserve the areas of the Indio Hills as open space with limited development allowed. Open space designations between this alternative and the City's existing General Plan are relatively the same and no differences in impacts are anticipated.

Level of impact as compared to the proposed plan: Similar

- ▶ **Soils** - Similar areas of the Planning Area would be developed under this alternative as with the proposed plan. The areas adjacent to the Indio Hills will be preserved in both the proposed plan and this alternative. Some areas will be developed at lesser or greater intensities, however, overall grading of sites will be similar and therefore have similar impacts on soils.

Level of impact as compared to the proposed plan: Similar

- ▶ **Agricultural Resources** - This alternative would not allow the continuation of agricultural land uses in areas that have been designated as agriculture on the City's and County's General Plan Land Use diagrams. The proposed plan does not designate lands for agricultural uses in the Planning Area, which will eventually eliminate 6,577 acres of prime agricultural soils. This is a significant impact of the proposed plan and this alternative that can not be mitigated to insignificant. This alternative would have a similar impact on agricultural than the proposed plan. It should be noted, the County has approved two large specific plans on prime agricultural soils north of I-10 introducing significant urban intrusion in the area.

Level of impact as compared to the proposed plan: Similar

- ▶ **Water Resources** - This alternative proposes similar areas for development and for open space as the proposed plan, therefore, impacts on groundwater would be similar. An increase in development in both this alternative and the proposed plan will have similar impacts on both groundwater resources and water quality.

Level of impact as compared to the proposed plan: Similar

- ▶ **Biological Resources** - The conversion of undeveloped portions of land to more urban uses will remain the same as those of the proposed plan. The vast majority of sensitive plant and animal communities are found in areas that will remain as open space under this alternative and the proposed plan. As with the proposed plan increased development under this alternative will create similar impacts to plant and animal communities due to an overall reduction of habitat.

Level of impact as compared to the proposed plan: Similar

- ▶ **Energy Conservation** - Increased land development under this alternative will create similar additional demands on existing energy sources as will the proposed plan, resulting in a loss of nonrenewable resources. The need for electricity, petroleum products, and natural gas will be increased because of the increase in population.

Level of impact as compared to the proposed plan: More

- ▶ **Mineral Resources** - This alternative provides for the continued extraction of mineral resources in designated areas adjacent to the Indio Hills. The proposed plan designates these areas in the northern Planning Area for Resource Recovery to allow for continued extraction. Impacts to mineral resources are similar in both this alternative and the proposed plan.

Level of impact as compared to the proposed plan: Similar

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- ▶ **Cultural Resources** - Cultural resources will experience similar impacts with this alternative as with the proposed plan. Lands to be developed are located in similar areas and will require similar grading activities. The risk of disturbing cultural resource areas is the same for this alternative and the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Noise** - Ambient noise levels from the addition of vehicles on the roadways as a result of this alternative would have similar impacts as with the proposed plan. The number of vehicles will be increased slightly over that with the proposed plan; however, the majority of Planning Area is currently subjected to noise at and above 60 CNEL and noise reduction measures will needed to be included as a condition of approval on most residential developments. Impacts on noise for this alternative are slightly more than those anticipated for the proposed plan.

Level of impact as compared to the proposed plan: Slightly More

- ▶ **Air Quality** - Impacts on air quality would be greater with this alternative due to increased intensity of development proposed in the Shadow Hills area and southern Planning Area. The number of acres to be developed under this alternative are similar to the proposed plan, however, intensities of development are increased and would therefore increase the amount of traffic produced under the proposed plan. This alternative would experience similar fugitive dust emissions during development. Impacts to air quality are anticipated to be slightly more with this alternative.

Level of impact as compared to the proposed plan: Slightly More

- ▶ **Police and Fire Services** - Increased development under this alternative will create additional burdens on police and fire services within the community. An anticipated 261 police officers will be required with the implementation of the proposed plan and 365 with this alternative. The same acreage will be served with this alternative as with the proposed plan.

Impact to police and fire services would be slightly increased under this alternative.

Level of impact as compared to the proposed plan: More

- ▶ **Emergency Preparedness** - This alternative will result in the same likelihood of natural hazards occurring, including earthquakes, slope failure, erosion, floods, and wildfires. Proposed development under this alternative would put additional populations at risk, similarly to the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Hazardous Materials** - The implementation of the High Density Alternative has the potential to subject humans to common hazardous materials waste problems similar to what would result with the proposed plan. Increased population resulting from development of currently undeveloped lands will put more persons at risk and increase the potential for hazardous wastes.

Level of impact as compared to the proposed plan: Similar

- ▶ **Geology and Seismicity** - This alternative would have similar impacts on geology and seismicity. Dangers to the population relating to geology and seismic hazards would be the same as with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Flood Hazards** - Impacts on flood hazards would be similar to the proposed plan. As development occurs infrastructure will be built to protect structures and down stream properties which will occur with the proposed plan and this alternative.

Level of impact as compared to the proposed plan: Similar

- ▶ **Airports** - Land uses in the airport influence area under this alternative are the same as with the proposed plan. Impacts from overflights will remain the same as with the proposed plan.

Level of impact as compared to the proposed plan: Similar

- ▶ **Housing** - Implementation of this alternative will result in an increase in dwelling units greater to that of the proposed plan (56,060 with the proposed plan and 78,437 with the High Density Alternative). As with the proposed plan this alternative proposes a more even distribution but greater intensity of residential densities throughout the Planning Area. This alternative would result in similar impacts to housing.

Level of impact as compared to the proposed plan: More

LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

9.1 THE RELATIONSHIP BETWEEN LOCAL SHORT- TERM USES OF MAN'S ENVIRONMENT AND LONG- TERM PRODUCTIVITY

If the City of Indio General Plan is approved and implemented, a variety of short-term and long-term impacts will occur on a local basis.

Short-term impacts will occur during construction of projects throughout the Planning Area. Portions of surrounding lands would be temporarily impacted by dust, noise and air pollution. Such impacts could affect already-built areas of the Planning Area. In addition, impacts could occur from wind and water erosion of soils during grading. These disruptions, however, are considered to be short-term impacts and can be mitigated to a large degree.

The long-term effect of project implementation is the gradual conversion of the Planning Area from a predominantly open agricultural area north of I-10 into an urban community including residential, commercial, and recreational land uses. As this conversion occurs, the existing characteristics of the physical, biological, cultural, aesthetic, and human environment will be impacted. Consequences of this urbanization include increased traffic volumes, additional noise, degradation of important biological habitat, incremental degradation of the regional air basin, increased demands for public services and utilities including water and sewer services, and increased energy and natural resource consumption.

Ultimate development of the land uses proposed in the General Plan would create long-term environmental consequences that are associated with any form of urbanization. The proposed plan

has been designed to benefit the City of Indio, by providing a plan that takes into consideration the needs of its citizens, and is environmentally sensitive.

The proposed plan will ultimately provide for a form of long-term productivity which appears to be compatible with human needs in the Coachella Valley area.

LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

9.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Implementation of the Indio General Plan would result in the following primary environmental changes:

- ▶ Permanent commitment of land which will be physically altered by grading and construction activities to create dwellings, commercial and industrial uses, recreational uses, public facilities, infrastructure, and access roads. The commitment of land to urban use continues the trend toward urbanization of these resources.
- ▶ The Resource Recovery land use designation will allow the continuation of sand and gravel surface mining operations in the area. Although sand and gravel is a nonrenewable resource, the land use designation allows the continuation of mines such as Granite Constructions aggregate mine providing the Coachella Valley with a readily excessable source of concrete and related materials. This cuts down transportation costs and mileage which indirectly effect air quality.
- ▶ Disturbance and/or loss of some flora and fauna populations will occur. This disturbance may also effect existing populations on adjoining lands. Revegetation will occur in the Planning Area, however, long-term effects cannot be assessed at this time. Therefore, long-term irreversible impacts may result to biological resources.
- ▶ Permanent commitment of new materials such as lumber, gravel, and sand for construction. Some materials such as woods are already being depleted worldwide. The development and maintenance of the site for urban use is considered a nonrenewable investment of such resources, and use of them will have cumulative impacts.
- ▶ Removal of 6,577 acres of prime farmland soils for agricultural purposes.
- ▶ The increased demand on public services and utilities due to the proposed plan are a permanent commitment of these resources. In

particular, water resources, energy sources such as fuels, natural gas and electricity.

- ▶ The energy utilized for project construction as well as the additional energy consumed in maintaining the proposed plan represents permanent energy commitments.

9.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED ACTION

Growth inducing impacts as defined by CEQA include effects of the project that "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included are projects that remove obstacles to population growth. It must not be assumed the growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The proposed project is located within a rapidly urbanizing area of the Coachella Valley. The Coachella Valley subregion, as delineated by the SCAG, is predicted to increase from a 1995 population of 43,374 to approximately 51,494 in the year 2010, a 84 percent increase overall. The SCAG figures were based on the existing City limits. The Planning Area for the proposed General Plan has expanded the City area from 19.8 to 41.5 square miles an increase of 110 percent. The City of Indio is predicted to increase to a 2020 population of 182,525 from a 1992 population of 40,378 with the Proposed Plan.

The City of Indio General Plan itself does not cause growth to occur. The General Plan is a master plan providing the framework by which public officials and citizens will be guided on making decisions relative to development within the Planning Area. It is the implementation of the land use policies that will incrementally increase demands for public services, utilities, and infrastructure, and the need for medical, educational, and recreation facilities.

This growth is not adverse in and of itself, but the need for accompanying expansion of public services could lead to adverse effects if the expansion is not sufficient in terms of quantity or timing. If the costs for increases in utilities and services can be met through cooperative agreements between the applicants and servicing agencies, by the collection of development fees, and/or the establishment of community services districts, then the anticipated increase in demand should not reduce or impair any existing or future levels of utility services, either locally or regionally.

Project-generated tax revenues will contribute to expanding the economic base of the City of Indio and thus contribute to growth inducement. The City will be able to afford additional services to its citizens with additional tax revenues. As the City is able to provide additional newer community services the quality of life in Indio will increase; therefore, attracting additional residents, commercial and industrial growth, and the cycle begins again.

Although buildout of the Planning Area not occur in the near future, the proposed plan is expected to help regulate the rate of growth over a 20-year period. The provision of water and sewer services and the extension of utilities to and within the Planning Area will contribute to growth in the surrounding areas, due to their availability. The provision and extension of roadways and utility and energy systems could eliminate possible constraints to development in these areas and thus serve as growth inducements. This is of particular concern in the Shadow Hills area which is currently lacking adequate infrastructure. Extension of infrastructure in this area north of I-10 will indirectly cause growth.

The location of the Planning Area in a semi-rural but steadily developing area could result in conversion of adjoining agricultural lands outside the City limits to similar urban uses. Approval of the proposed plan includes conversion of land currently designated as containing prime farmland soils to urban uses. Although these lands may eventually convert to other uses, the process could be accelerated by the provision in the community development element of the proposed plan which will allow urban uses on lands which are currently designated for agricultural uses.

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2. Contacts
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AAQS	- Ambient Air Quality Standards	CVSWC	- Coachella Valley Stormwater Char
ACHP	- Advisory Council on Historic Preservation	CVSWD	- Coachella Valley Stormwater Distri
AIPP	- Art in Public Places	CVUSD	- Coachella Valley Unified School District
ALS	- Advanced Life Support	CVWD	- Coachella Valley Water District
ALUC	- Airport Land Use Commission		
AQMP	- Air Quality Management Plan	dB	- decibels
AR	- Alternatives Report	dba	- A-weighted sound level
AVR	- average rideshare	DC	- Downtown Commerce
		DOHS	- Department of Health Services
BGY	- billion gallons per year	DRB	- Design Review Board
BLM	- Bureau of Land Management	DSUSD	- Desert Sand Unified School District
BP	- Business Park	du	- density units
		du/ac	- density units per acre
CAAQS	- California Ambient Air Quality Standards	DWA	- Desert Water Agency
CBA	- Cotton/Beland Associates	EIR	- Environmental Impact Report
CBD	- Central Business District	EOC's	- Emergency Operations Centers
CDBG	- Community Development Block Grant	EPA	- Environmental Protection Agency
CDFG	- California Department of Fish and Game	ESR	- Environmental Setting Report
CEQA	- California Environmental Quality Act	FAR	- Floor to Area Ratio
cfs	- cubic feet per second	FBI	- Federal Bureau of Investigation
CHP	- California Highway Patrol	FEMA	- Federal Emergency Management Agency
CIR	- Community Issue Report	FHWA	- Federal Highway Administration
CMP	- corrugated metal pipe	FIRM	- Flood Insurance Rate Map
CNDDDB	- California Natural Diversity Database	FTE	- Full Time Equivalent
CNEL	- Community Noise Equivalent Level		
CO	- carbon monoxide	GLA	- Gross Leasable Area
CO ₂	- carbon dioxide	GLO	- Government Land Office
COD	- College of the Desert	GMP	- Growth Management Plan
COGs	- Council of Governments	gpm	- gallon per minute
CPD	- Commercial Planned Development	GPR	- Goals and Policies Report
CSP	- Conceptual Specific Plan	GTE	- General Telephone and Electric Company
CSP	- corrugated steel pipe		
CVAG	- Coachella Valley Association of Governments	HABS	- Historic American Building Survey
CVEZA	- Coachella Valley Enterprize Zone Authority	HCD	- Department of Housing and Community Development
CVRPD	- Coachella Valley Recreation and Park District		

HUD	- Federal Department of Housing and Urban Development	PM ₁₀	- suspended particulate matter
I-10	- Interstate 10	ppm	- parts per million
IC	- incident commander	PSP	- Project Specific Plan
ICMA	- Internal City Managers Association	Qal	- alluvium
ICS	- Incident Command System	Qb	- Quaternary bedrock
IID	- Imperial Irrigation District	Qds	- dune sand
IP	- Industrial Park	RCLS	- Riverside County Library System
JFD	- J.F. Davidson	RCP	- reinforced concrete pipe
LACM	- L.A. Cultural Museum	RCSWM	- Riverside County Solid Waste Management
LAFCO	- Local Agency Formation Commission	RH	- Residential High
Leq	- steady-state energy level equal to the energy centered of time varying period	RHNA	- Regional Housing Needs Assessment
Ldn	- Day-Night Noise Level	RMP	- Regional Mobility Plan
LOS	- Level of Service	RO	- Residential Office
MEA	- Master Environmental Assessment	ROG	- Reactive Organic Gases
MGA	- Modified Gross Acres	ROW	- Right-of-Way
mgd	- million gallons per day	RPD	- Residential Planned Development
mg/L	- milligrams per liter	SBCM	- San Bernardino County Museum
MHPD	- Mobile Home Park Planned Development	SCAB	- South Coast Air Basin
mm	- millimeters	SCAG	- Southern California Association of Governments
MPD	- Manufacturing Planned Development	SCAQMD	- South Coast Air Quality Management District
mph	- miles per hour	SCG	- Southern California Gas Company
MRZ	- Mineral Resource Zones	SCE	- Southern California Edison
MS	- Medical Services	SCS	- Soil Conservation Service
MTSO	- Mobile Telephone Switching Office	SEDAB	- South East Desert Air Basin
MU(DA)	- Mixed Use (Development Agreement)	SHIPP	- Shadow Hills Interim Policy Plan
MW(SP)	- Mixed Use (Specific Plan)	SHPO	- State Historic Preservation Officer
MWD	- Metropolitan Water District of Southern California	SIP	- State Implementation Plan
NAAQS	- National Ambient Air Quality Standards	SMARA	- Surface Mining and Reclamation Act
NCHRP	- National Cooperative Highway Research Program	SNPR	- significant nonrenewable paleontologic resources
NO	- nitric oxide	SPF	- Standard Project Flood
NO ₂	- nitrogen dioxide	SO ₂	- sulfur dioxide
NO _x	- nitrogen oxide(s)	SWAT	- Special Weapons and Tactics
NOP	- Notice of Preparation	TAMS	- tandem acceleration mass spectrometry
NOP/IS	- Notice of Preparation/Initial Study	TAZ	- Traffic Analysis Zone
NPDES	- National Pollutant Discharge Elimination System	Tb	- Tertiary bedrock
NRHP	- National Register of Historic Places	TDS	- total dissolved solids
NRPA	- National Recreation and Park Association	USDA	- United States Department of Agriculture
OES	- Office of Emergency Services	USFWS	- U.S. Fish and Wildlife Service
OPR	- Office of Planning and Research	USGS	- U.S. Geological Survey
O _x	- oxidant	UST	- underground storage tank
P-C	- production-consumption	VC	- Village Commercial
PCC	- Portland Cement Concrete	VSD	- Valley Sanitary District

APPENDICES

- A. Land Use
- B. Circulation
- C. Economic Development
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- E. Noise
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APPENDIX A

LAND USE

APPENDIX A - LAND USE

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Table A-1

**INDIO GENERAL PLAN - 2020
Summary of Land Use Designations**

GP	General Plan Designation	Acres	Mod. Gross Acres	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	3,348.1	3,013.3	2,260	10,547	7,030	32,801	0
EE	Equestrian Estates	709.5	638.6	958	958	2,980	2,980	0
RH	Residential-High Density	370.4	333.4	5,004	5,004	15,563	15,563	0
RL	Residential-Low Density	6,725.2	6,052.7	24,213	27,668	75,303	86,044	0
RM	Residential-Med. Density	1,350.8	1,215.7	8,509	11,405	26,460	35,467	0
CC	Community Commercial	783.6	626.8	0	0	0	0	6,826,725
CO	Commercial Office	128.5	102.8	0	0	0	0	1,567,595
DC	Downtown Commerce	128.3	102.6	461	461	1,434	1,434	782,654
NC	Neighborhood Commercial	113.8	91.0	0	0	0	0	991,970
RC	Regional Commercial	48.9	39.1	0	0	0	0	597,186
BP	Business Park	506.3	405.0	0	0	0	0	6,175,849
IP	Industrial Park	430.2	344.2	0	0	0	0	5,997,515
M	Manufacturing	405.3	219.7	0	0	0	0	3,829,272
P	Public Facilities	1,021.3	919.2	0	0	0	0	0
OS	Open Space	6,031.7	6,031.7	0	0	0	0	0
RR	Resource Recovery	1,057.4	1,057.4	0	0	0	0	0
MU(DA)	Mixed Use (Dev Agreement)	432.9	346.3	1,039	1,039	3,231	3,231	3,621,300
MU(SP-100)	Mixed Use (Specific Plan)	128.3	102.6	462	462	1,437	1,437	939,093
MU(SP-200)	Mixed Use (Specific Plan)	265.1	212.1	954	954	2,967	2,967	1,940,664
MU(SP-300)	Mixed Use (Specific Plan)	336.9	269.5	1,213	1,213	3,771	3,771	2,466,103
VC	Village Core	90.4	72.3	543	724	1,689	2,251	236,433
SP-231	SP-231: Adams 34	597.1	537.4	941	941	2,927	2,927	67,845
SP-281	SP-281: Del Webb	1,452.5	1,307.2	5,745	5,745	17,866	17,866	549,901
XXX	I-10 Freeway	100.4	100.4	0	0	0	0	0
Planning Area Total:		26,564.1	24,142.3	52,302	67,121	162,658	208,739	36,590,105

Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 100

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	9.0	7	9	22	28	0
TAZ 100	Sub-Total			7	9	22	28	0

TAZ CODE 101

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	6.0	0	0	0	0	0
MU(SP-3)	Mixed Use (Specific Plan)	50	8.4	38	38	118	118	64,262
TAZ 101	Sub-Total			38	38	118	118	64,262

TAZ CODE 103

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	54.0	54	54	168	168	0
OS	Open Space	99	21.0	0	0	0	0	0
MU(SP-3)	Mixed Use (Specific Plan)	50	2.2	10	10	31	31	17,228
TAZ 103	Sub-Total			64	64	199	199	17,228

TAZ CODE 104

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	741.0	592	741	1,841	2,305	0
TAZ 104	Sub-Total			592	741	1,841	2,305	0

TAZ CODE 105

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	723.0	578	723	1,798	2,249	0
TAZ 105	Sub-Total			578	723	1,798	2,249	0

TAZ CODE 107

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
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Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

RL	Residential-Low Density	3	1,206.0	975	1,206	3,033	3,751	0
P	Public Facilities	99	3.6	0	0	0	0	0
TAZ 107	Sub-Total			975	1,206	3,033	3,751	0

TAZ CODE 108

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	372.0	372	372	1,157	1,157	0
CC	Community Commercial	12	19.5	0	0	0	0	212,682
IP	Industrial Park	21	45.4	0	0	0	0	791,572
P	Public Facilities	99	13.5	0	0	0	0	0
OS	Open Space	99	53.4	0	0	0	0	0
XXX	I-10 Freeway	99	11.6	0	0	0	0	0
TAZ 108	Sub-Total			372	372	1,157	1,157	1,004,254

TAZ CODE 109

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	888.0	753	888	2,342	2,762	0
NC	Neighborhood Commercial	11	12.9	0	0	0	0	140,481
BP	Business Park	20	36.8	0	0	0	0	562,120
TAZ 109	Sub-Total			753	888	2,342	2,762	702,601

TAZ CODE 113

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
BP	Business Park	20	40.5	0	0	0	0	618,530
TAZ 113	Sub-Total			0	0	0	0	618,530

TAZ CODE 118

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	49.4	0	0	0	0	538,184
BP	Business Park	20	70.3	0	0	0	0	1,072,251
XXX	I-10 Freeway	99	1.1	0	0	0	0	0
TAZ 118	Sub-Total			0	0	0	0	1,610,435

Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 119

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
MU(SP-2)	Mixed Use (Specific Plan)	50	56.7	255	255	793	793	432,681
XXX	I-10 Freeway	99	1.2	0	0	0	0	0
TAZ 119	Sub-Total			255	255	793	793	432,681

TAZ CODE 120

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	367.0	294	367	914	1,141	0
TAZ 120	Sub-Total			294	367	914	1,141	0

TAZ CODE 121

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	22.3	0	0	0	0	243,283
BP	Business Park	20	11.3	0	0	0	0	173,499
TAZ 121	Sub-Total			0	0	0	0	416,782

TAZ CODE 122

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
BP	Business Park	20	44.6	0	0	0	0	680,429
TAZ 122	Sub-Total			0	0	0	0	680,429

TAZ CODE 123

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	10.0	2	10	6	31	0
RL	Residential-Low Density	3	722.0	578	722	1,798	2,245	0
TAZ 123	Sub-Total			580	732	1,804	2,276	0

TAZ CODE 124

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
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Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

EE	Equestrian Estates	2	107.0	107	107	333	333	0
RL	Residential-Low Density	3	359.0	287	359	893	1,116	0
TAZ 124	Sub-Total			394	466	1,226	1,449	0

TAZ CODE 125

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	506.0	108	506	336	1,574	0
TAZ 125	Sub-Total			108	506	336	1,574	0

TAZ CODE 126

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
EE	Equestrian Estates	2	208.0	208	208	647	647	0
TAZ 126	Sub-Total			208	208	647	647	0

TAZ CODE 127

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	574.0	459	574	1,427	1,785	0
OS	Open Space	99	9.1	0	0	0	0	0
TAZ 127	Sub-Total			459	574	1,427	1,785	0

TAZ CODE 128

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
EE	Equestrian Estates	2	177.0	177	177	550	550	0
OS	Open Space	99	24.1	0	0	0	0	0
TAZ 128	Sub-Total			177	177	550	550	0

TAZ CODE 129

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
EE	Equestrian Estates	2	207.0	207	207	644	644	0
RL	Residential-Low Density	3	9.0	7	9	22	28	0
SP-281	SP-281: Del Webb	7	24.5	112	112	348	348	0
TAZ 129	Sub-Total			326	328	1,014	1,020	0

Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 130

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
EE	Equestrian Estates	2	208.0	208	208	647	647	0
TAZ 130	Sub-Total			208	208	647	647	0

TAZ CODE 131

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	498.0	107	498	333	1,549	0
TAZ 131	Sub-Total			107	498	333	1,549	0

TAZ CODE 132

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	3.2	0	0	0	0	34,957
BP	Business Park	20	94.4	0	0	0	0	1,439,375
TAZ 132	Sub-Total			0	0	0	0	1,474,332

TAZ CODE 133

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	420.0	420	420	1,306	1,306	0
TAZ 133	Sub-Total			420	420	1,306	1,306	0

TAZ CODE 134

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
SP-281	SP-281: Del Webb	7	148.1	673	673	2,093	2,093	0
TAZ 134	Sub-Total			673	673	2,093	2,093	0

TAZ CODE 135

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
SP-281	SP-281: Del Webb	7	249.6	1,133	1,133	3,524	3,524	0

Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ 135	Sub-Total			1,133	1,133	3,524	3,524	0
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TAZ CODE 136

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
SP-281	SP-281: Del Webb	7	286.7	1,302	1,302	4,049	4,049	0
TAZ 136	Sub-Total			1,302	1,302	4,049	4,049	0

TAZ CODE 137

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
SP-281	SP-281: Del Webb	7	102.3	465	465	1,446	1,446	0
TAZ 137	Sub-Total			465	465	1,446	1,446	0

TAZ CODE 138

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	120.0	120	120	373	373	0
SP-281	SP-281: Del Webb	7	197.2	895	895	2,783	2,783	0
TAZ 138	Sub-Total			1,015	1,015	3,156	3,156	0

TAZ CODE 139

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
SP-281	SP-281: Del Webb	7	139.5	634	634	1,972	1,972	0
TAZ 139	Sub-Total			634	634	1,972	1,972	0

TAZ CODE 140

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	47.0	47	47	146	146	0
SP-281	SP-281: Del Webb	7	102.3	465	465	1,446	1,446	0
TAZ 140	Sub-Total			512	512	1,592	1,592	0

Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 141

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	921.0	921	921	2,864	2,864	0
SP-231	SP-231: Adams 34	7	18.2	32	32	100	100	0
TAZ 141	Sub-Total			953	953	2,964	2,964	0

TAZ CODE 159

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
SP-281	SP-281: Del Webb	7	42.0	0	0	0	0	549,901
TAZ 159	Sub-Total			0	0	0	0	549,901

TAZ CODE 160

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	16.3	0	0	0	0	177,616
SP-281	SP-281: Del Webb	7	14.5	66	66	205	205	0
TAZ 160	Sub-Total			66	66	205	205	177,616

TAZ CODE 161

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	6.0	6	6	19	19	0
BP	Business Park	20	21.9	0	0	0	0	334,040
TAZ 161	Sub-Total			6	6	19	19	334,040

TAZ CODE 162

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
SP-231	SP-231: Adams 34	7	519.1	909	909	2,827	2,827	67,845
TAZ 162	Sub-Total			909	909	2,827	2,827	67,845

TAZ CODE 163

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
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Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

EE	Equestrian Estates	2	51.0	51	51	159	159	0
OS	Open Space	99	74.7	0	0	0	0	0
RR	Resource Recovery	43	36.8	0	0	0	0	0
TAZ 163	Sub-Total			51	51	159	159	0

TAZ CODE 164

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	181.0	145	181	451	563	0
BP	Business Park	20	9.5	0	0	0	0	144,837
TAZ 164	Sub-Total			145	181	451	563	144,837

TAZ CODE 165

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	390.0	312	390	970	1,213	0
OS	Open Space	99	21.9	0	0	0	0	0
TAZ 165	Sub-Total			312	390	970	1,213	0

TAZ CODE 166

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	396.0	231	396	718	1,232	0
CC	Community Commercial	12	8.2	0	0	0	0	90,060
MU(SP-2)	Mixed Use (Specific Plan)	50	20.1	91	91	283	283	153,603
TAZ 166	Sub-Total			322	487	1,001	1,515	243,663

TAZ CODE 167

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	357.0	286	357	889	1,110	0
P	Public Facilities	99	67.7	0	0	0	0	0
TAZ 167	Sub-Total			286	357	889	1,110	0

TAZ CODE 168

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
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Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

RL	Residential-Low Density	3	612.0	490	612	1,524	1,903	0
P	Public Facilities	99	0.6	0	0	0	0	0
VC	Village Core	50	17.7	133	178	414	554	48,406
TAZ 168	Sub-Total			623	790	1,938	2,457	48,406

TAZ CODE 169

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	570.0	456	570	1,418	1,773	0
P	Public Facilities	99	11.7	0	0	0	0	0
VC	Village Core	50	16.7	126	168	392	522	45,711
TAZ 169	Sub-Total			582	738	1,810	2,295	45,711

TAZ CODE 170

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
P	Public Facilities	99	22.9	0	0	0	0	0
OS	Open Space	99	3.6	0	0	0	0	0
MU(SP-2)	Mixed Use (Specific Plan)	50	105.8	476	476	1,480	1,480	806,742
TAZ 170	Sub-Total			476	476	1,480	1,480	806,742

TAZ CODE 171

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
P	Public Facilities	99	10.0	0	0	0	0	0
MU(SP-2)	Mixed Use (Specific Plan)	50	29.4	132	132	411	411	224,192
XXX	I-10 Freeway	99	1.4	0	0	0	0	0
TAZ 171	Sub-Total			132	132	411	411	224,192

TAZ CODE 172

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	34.3	0	0	0	0	0
MU(DA)	Mixed Use (Dev Agreement)	50	73.1	220	220	684	684	637,457
TAZ 172	Sub-Total			220	220	684	684	637,457

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 173

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	403.0	323	403	1,005	1,253	0
RM	Residential-Med. Density	4	395.0	395	395	1,228	1,228	0
OS	Open Space	99	15.2	0	0	0	0	0
TAZ 173	Sub-Total			718	798	2,233	2,481	0

TAZ CODE 174

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	415.0	332	415	1,033	1,291	0
P	Public Facilities	99	51.8	0	0	0	0	0
VC	Village Core	50	21.9	165	220	513	684	59,813
TAZ 174	Sub-Total			497	635	1,546	1,975	59,813

TAZ CODE 175

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	676.0	541	676	1,683	2,102	0
P	Public Facilities	99	13.1	0	0	0	0	0
VC	Village Core	50	15.8	119	158	370	491	43,097
TAZ 175	Sub-Total			660	834	2,053	2,593	43,097

TAZ CODE 176

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	318.0	255	318	793	989	0
TAZ 176	Sub-Total			255	318	793	989	0

TAZ CODE 177

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	16.0	12	16	37	50	0
P	Public Facilities	99	2.7	0	0	0	0	0
OS	Open Space	99	408.7	0	0	0	0	0
RR	Resource Recovery	43	1,020.6	0	0	0	0	0

Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ 177 Sub-Total 12 16 37 50 0

TAZ CODE 178

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	337.0	270	337	840	1,048	0
P	Public Facilities	99	9.0	0	0	0	0	0
TAZ 178	Sub-Total			270	337	840	1,048	0

TAZ CODE 179

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	681.0	545	681	1,695	2,118	0
TAZ 179	Sub-Total			545	681	1,695	2,118	0

TAZ CODE 180

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	366.0	292	366	908	1,138	0
RM	Residential-Med. Density	4	251.0	251	251	781	781	0
MU(SP-1)	Mixed Use (Specific Plan)	50	33.9	153	153	476	476	258,572
TAZ 180	Sub-Total			696	770	2,165	2,395	258,572

TAZ CODE 181

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
MU(DA)	Mixed Use (Dev Agreement)	50	91.1	273	273	849	849	793,663
TAZ 181	Sub-Total			273	273	849	849	793,663

TAZ CODE 182

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
MU(DA)	Mixed Use (Dev Agreement)	50	86.1	258	258	802	802	750,539
TAZ 182	Sub-Total			258	258	802	802	750,539

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 183

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	376.0	301	376	936	1,169	0
MU(SP-1)	Mixed Use (Specific Plan)	50	68.7	309	309	961	961	524,005
TAZ 183	Sub-Total			610	685	1,897	2,130	524,005

TAZ CODE 184

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	639.0	511	639	1,589	1,987	0
P	Public Facilities	99	15.2	0	0	0	0	0
TAZ 184	Sub-Total			511	639	1,589	1,987	0

TAZ CODE 185

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	236.0	189	236	588	734	0
P	Public Facilities	99	1.2	0	0	0	0	0
OS	Open Space	99	271.9	0	0	0	0	0
TAZ 185	Sub-Total			189	236	588	734	0

TAZ CODE 186

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	849.9	0	0	0	0	0
TAZ 186	Sub-Total			0	0	0	0	0

TAZ CODE 187

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	144.0	115	144	358	448	0
OS	Open Space	99	204.0	0	0	0	0	0
TAZ 187	Sub-Total			115	144	358	448	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 188

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	425.0	340	425	1,057	1,322	0
P	Public Facilities	99	14.0	0	0	0	0	0
TAZ 188	Sub-Total			340	425	1,057	1,322	0

TAZ CODE 189

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	588.0	470	588	1,462	1,829	0
NC	Neighborhood Commercial	11	16.1	0	0	0	0	175,656
TAZ 189	Sub-Total			470	588	1,462	1,829	175,656

TAZ CODE 190

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
MU(DA)	Mixed Use (Dev Agreement)	50	95.9	288	288	896	896	836,091
TAZ 190	Sub-Total			288	288	896	896	836,091

TAZ CODE 191

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	441.0	441	441	1,372	1,372	0
CC	Community Commercial	12	25.2	0	0	0	0	274,973
BP	Business Park	20	31.6	0	0	0	0	483,146
XXX	I-10 Freeway	99	0.5	0	0	0	0	0
TAZ 191	Sub-Total			441	441	1,372	1,372	758,119

TAZ CODE 192

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	430.0	344	430	1,070	1,337	0
OS	Open Space	99	67.3	0	0	0	0	0
TAZ 192	Sub-Total			344	430	1,070	1,337	

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 193

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	302.0	241	302	750	939	0
P	Public Facilities	99	18.2	0	0	0	0	0
TAZ 193	Sub-Total			241	302	750	939	0

TAZ CODE 194

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	259.0	207	259	644	805	0
OS	Open Space	99	105.9	0	0	0	0	0
TAZ 194	Sub-Total			207	259	644	805	0

TAZ CODE 195

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	1,097.0	0	0	0	0	0
TAZ 195	Sub-Total			0	0	0	0	0

TAZ CODE 196

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	67.0	54	67	168	208	0
OS	Open Space	99	106.2	0	0	0	0	0
TAZ 196	Sub-Total			54	67	168	208	0

TAZ CODE 197

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	38.0	8	38	25	118	0
RL	Residential-Low Density	3	292.0	234	292	728	908	0
P	Public Facilities	99	22.8	0	0	0	0	0
OS	Open Space	99	112.5	0	0	0	0	0
TAZ 197	Sub-Total			242	330	753	1,026	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 198

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	382.0	382	382	1,188	1,188	0
P	Public Facilities	99	50.9	0	0	0	0	0
TAZ 198	Sub-Total			382	382	1,188	1,188	0

TAZ CODE 199

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	526.0	526	526	1,636	1,636	0
NC	Neighborhood Commercial	11	4.1	0	0	0	0	45,629
OS	Open Space	99	5.5	0	0	0	0	0
TAZ 199	Sub-Total			526	526	1,636	1,636	45,629

TAZ CODE 200

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	28.1	0	0	0	0	306,009
XXX	I-10 Freeway	99	6.4	0	0	0	0	0
TAZ 200	Sub-Total			0	0	0	0	306,009

TAZ CODE 201

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	865.0	504	865	1,567	2,690	0
CC	Community Commercial	12	69.1	0	0	0	0	752,499
XXX	I-10 Freeway	99	11.9	0	0	0	0	0
TAZ 201	Sub-Total			504	865	1,567	2,690	752,499

TAZ CODE 202

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	252.0	54	252	168	784	0
RM	Residential-Med. Density	4	894.0	522	894	1,623	2,780	0
NC	Neighborhood Commercial	11	1.9	0	0	0	0	20,800

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ 202	Sub-Total		576	1,146	1,791	3,564	20,800
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TAZ CODE 203

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	475.0	102	475	317	1,477	0
P	Public Facilities	99	18.2	0	0	0	0	0
TAZ 203	Sub-Total			102	475	317	1,477	0

TAZ CODE 204

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	205.0	44	205	137	638	0
P	Public Facilities	99	3.5	0	0	0	0	0
OS	Open Space	99	45.4	0	0	0	0	0
TAZ 204	Sub-Total			44	205	137	638	0

TAZ CODE 205

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	135.1	0	0	0	0	0
TAZ 205	Sub-Total			0	0	0	0	0

TAZ CODE 206

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	954.7	0	0	0	0	0
TAZ 206	Sub-Total			0	0	0	0	0

TAZ CODE 207

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	167.0	36	167	112	519	0
OS	Open Space	99	28.0	0	0	0	0	0
TAZ 207	Sub-Total			36	167	112	519	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 208

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	439.0	94	439	292	1,365	0
P	Public Facilities	99	18.4	0	0	0	0	0
TAZ 208	Sub-Total			94	439	292	1,365	0

TAZ CODE 209

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	252.0	54	252	168	784	0
P	Public Facilities	99	2.9	0	0	0	0	0
OS	Open Space	99	72.6	0	0	0	0	0
TAZ 209	Sub-Total			54	252	168	784	0

TAZ CODE 210

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	512.0	512	512	1,592	1,592	0
P	Public Facilities	99	11.3	0	0	0	0	0
TAZ 210	Sub-Total			512	512	1,592	1,592	0

TAZ CODE 211

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	6.6	0	0	0	0	72,201
XXX	I-10 Freeway	99	7.1	0	0	0	0	0
TAZ 211	Sub-Total			0	0	0	0	72,201

TAZ CODE 215

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	388.0	83	388	258	1,207	0
P	Public Facilities	99	34.7	0	0	0	0	0
OS	Open Space	99	0.5	0	0	0	0	0
TAZ 215	Sub-Total			83	388	258	1,207	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 216

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	215.0	46	215	143	669	0
P	Public Facilities	99	0.6	0	0	0	0	0
OS	Open Space	99	133.1	0	0	0	0	0
TAZ 216	Sub-Total			46	215	143	669	0

TAZ CODE 217

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	302.6	0	0	0	0	0
TAZ 217	Sub-Total			0	0	0	0	0

TAZ CODE 218

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	272.6	0	0	0	0	0
TAZ 218	Sub-Total			0	0	0	0	0

TAZ CODE 219

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
OS	Open Space	99	127.3	0	0	0	0	0
TAZ 219	Sub-Total			0	0	0	0	0

TAZ CODE 220

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	336.0	72	336	224	1,045	0
P	Public Facilities	99	2.7	0	0	0	0	0
OS	Open Space	99	43.8	0	0	0	0	0
TAZ 220	Sub-Total			72	336	224	1,045	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 221

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	60.0	13	60	40	187	0
P	Public Facilities	99	15.0	0	0	0	0	0
TAZ 221	Sub-Total			13	60	40	187	0

TAZ CODE 239

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	0.2	0	0	0	0	2,287
M	Manufacturing	22	32.7	0	0	0	0	570,636
TAZ 239	Sub-Total			0	0	0	0	572,923

TAZ CODE 253

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	127.0	127	127	395	395	0
CC	Community Commercial	12	28.0	0	0	0	0	305,682
NC	Neighborhood Commercial	11	1.0	0	0	0	0	11,543
TAZ 253	Sub-Total			127	127	395	395	317,225

TAZ CODE 254

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	0.6	0	0	0	0	7,296
IP	Industrial Park	21	88.3	0	0	0	0	1,538,539
TAZ 254	Sub-Total			0	0	0	0	1,545,835

TAZ CODE 255

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	991.0	991	991	3,082	3,082	0
RL	Residential-Low Density	3	238.0	238	238	740	740	0
BP	Business Park	20	12.7	0	0	0	0	194,100
P	Public Facilities	99	9.6	0	0	0	0	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ 255	Sub-Total			1,229	1,229	3,822	3,822	194,691
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TAZ CODE 264

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	493.0	493	493	1,533	1,533	0
NC	Neighborhood Commercial	11	1.3	0	0	0	0	14,810
TAZ 264	Sub-Total			493	493	1,533	1,533	14,810

TAZ CODE 266

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	356.0	356	356	1,107	1,107	0
RM	Residential-Med. Density	4	377.0	377	377	1,172	1,172	0
TAZ 266	Sub-Total			733	733	2,279	2,279	0

TAZ CODE 267

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	275.0	275	275	855	855	0
RL	Residential-Low Density	3	237.0	237	237	737	737	0
CC	Community Commercial	12	22.3	0	0	0	0	243,718
P	Public Facilities	99	34.6	0	0	0	0	0
OS	Open Space	99	12.5	0	0	0	0	0
TAZ 267	Sub-Total			512	512	1,592	1,592	243,718

TAZ CODE 268

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	86.0	86	86	267	267	0
CC	Community Commercial	12	19.0	0	0	0	0	207,128
CO	Commercial Office	16	3.0	0	0	0	0	46,653
DC	Downtown Commerce	19	12.6	57	57	177	177	96,583
M	Manufacturing	22	1.9	0	0	0	0	34,500
TAZ 268	Sub-Total			143	143	444	444	384,864

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 269

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	8.6	0	0	0	0	93,654
IP	Industrial Park	21	15.1	0	0	0	0	263,451
M	Manufacturing	22	11.9	0	0	0	0	208,740
P	Public Facilities	99	0.2	0	0	0	0	0
TAZ 269	Sub-Total			0	0	0	0	565,845

TAZ CODE 270

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
IP	Industrial Park	21	2.0	0	0	0	0	35,893
M	Manufacturing	22	9.7	0	0	0	0	170,058
P	Public Facilities	99	91.6	0	0	0	0	0
OS	Open Space	99	40.0	0	0	0	0	0
TAZ 270	Sub-Total			0	0	0	0	205,951

TAZ CODE 271

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	16.8	0	0	0	0	183,605
IP	Industrial Park	21	96.0	0	0	0	0	1,673,052
M	Manufacturing	22	33.6	0	0	0	0	586,840
OS	Open Space	99	33.0	0	0	0	0	0
XXX	I-10 Freeway	99	1.0	0	0	0	0	0
TAZ 271	Sub-Total			0	0	0	0	2,443,497

TAZ CODE 272

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
IP	Industrial Park	21	28.4	0	0	0	0	496,410
M	Manufacturing	22	17.2	0	0	0	0	300,041
P	Public Facilities	99	9.2	0	0	0	0	0
TAZ 272	Sub-Total			0	0	0	0	796,451

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 273

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	83.0	83	83	258	258	0
RL	Residential-Low Density	3	304.0	304	304	945	945	0
CC	Community Commercial	12	18.4	0	0	0	0	200,485
NC	Neighborhood Commercial	11	1.0	0	0	0	0	11,108
BP	Business Park	20	31.0	0	0	0	0	472,931
P	Public Facilities	99	22.4	0	0	0	0	0
OS	Open Space	99	39.7	0	0	0	0	0
XXX	I-10 Freeway	99	3.8	0	0	0	0	0
TAZ 273	Sub-Total			387	387	1,203	1,203	684,524

TAZ CODE 274

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	88.0	88	88	274	274	0
CC	Community Commercial	12	21.3	0	0	0	0	231,957
NC	Neighborhood Commercial	11	1.0	0	0	0	0	11,543
OS	Open Space	99	58.3	0	0	0	0	0
XXX	I-10 Freeway	99	14.3	0	0	0	0	0
TAZ 274	Sub-Total			88	88	274	274	243,500

TAZ CODE 275

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	452.0	452	452	1,406	1,406	0
CC	Community Commercial	12	5.3	0	0	0	0	58,153
P	Public Facilities	99	10.8	0	0	0	0	0
OS	Open Space	99	47.6	0	0	0	0	0
XXX	I-10 Freeway	99	10.1	0	0	0	0	0
TAZ 275	Sub-Total			452	452	1,406	1,406	58,153

TAZ CODE 276

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	71.0	71	71	221	221	0
CC	Community Commercial	12	12.8	0	0	0	0	139,501

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

DC	Downtown Commerce	19	0.4	2	2	6	6	3,202
IP	Industrial Park	21	68.7	0	0	0	0	1,198,423
M	Manufacturing	22	31.8	0	0	0	0	554,780
TAZ 276	Sub-Total			73	73	227	227	1,895,906

TAZ CODE 277

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
DC	Downtown Commerce	19	22.1	99	99	308	308	168,545
OS	Open Space	99	10.5	0	0	0	0	0
TAZ 277	Sub-Total			99	99	308	308	168,545

TAZ CODE 278

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	12.2	0	0	0	0	133,620
DC	Downtown Commerce	19	42.5	191	191	594	594	324,000
P	Public Facilities	99	3.3	0	0	0	0	0
TAZ 278	Sub-Total			191	191	594	594	457,674

TAZ CODE 279

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	203.0	203	203	631	631	0
P	Public Facilities	99	25.8	0	0	0	0	0
TAZ 279	Sub-Total			203	203	631	631	0

TAZ CODE 280

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
P	Public Facilities	99	69.3	0	0	0	0	0
TAZ 280	Sub-Total			0	0	0	0	0

TAZ CODE 281

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
P	Public Facilities	99	69.1	0	0	0	0	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ 281	Sub-Total			0	0	0	0	0
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TAZ CODE 282

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	263.0	263	263	818	818	0
P	Public Facilities	99	8.5	0	0	0	0	0
TAZ 282	Sub-Total			263	263	818	818	0

TAZ CODE 283

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	2,864.0	2,291	2,864	7,125	8,907	0
NC	Neighborhood Commercial	11	6.9	0	0	0	0	75,686
P	Public Facilities	99	1.0	0	0	0	0	0
TAZ 283	Sub-Total			2,291	2,864	7,125	8,907	75,686

TAZ CODE 284

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	567.0	121	567	376	1,763	0
TAZ 284	Sub-Total			121	567	376	1,763	0

TAZ CODE 285

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	509.0	109	509	339	1,583	0
TAZ 285	Sub-Total			109	509	339	1,583	0

TAZ CODE 288

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	447.0	96	447	299	1,390	0
TAZ 288	Sub-Total			96	447	299	1,390	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 289

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	502.0	108	502	336	1,561	0
TAZ 289	Sub-Total			108	502	336	1,561	0

TAZ CODE 290

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	174.0	174	174	541	541	0
RL	Residential-Low Density	3	436.0	436	436	1,356	1,356	0
CO	Commercial Office	16	23.3	0	0	0	0	355,537
TAZ 290	Sub-Total			610	610	1,897	1,897	355,537

TAZ CODE 291

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	226.0	226	226	703	703	0
RL	Residential-Low Density	3	236.0	236	236	734	734	0
CC	Community Commercial	12	13.8	0	0	0	0	151,153
CO	Commercial Office	16	8.4	0	0	0	0	128,524
RC	Regional Commercial	13	39.1	0	0	0	0	597,186
OS	Open Space	99	3.6	0	0	0	0	0
TAZ 291	Sub-Total			462	462	1,437	1,437	876,863

TAZ CODE 292

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	562.0	562	562	1,748	1,748	0
RL	Residential-Low Density	3	183.0	183	183	569	569	0
RM	Residential-Med. Density	4	347.0	347	347	1,079	1,079	0
CC	Community Commercial	12	43.1	0	0	0	0	470,230
DC	Downtown Commerce	19	7.2	32	32	100	100	54,962
TAZ 292	Sub-Total			1,124	1,124	3,496	3,496	525,192

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 293

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	310.0	310	310	964	964	0
CC	Community Commercial	12	10.5	0	0	0	0	115,325
DC	Downtown Commerce	19	17.7	80	80	249	249	135,308
P	Public Facilities	99	11.6	0	0	0	0	0
TAZ 293	Sub-Total			390	390	1,213	1,213	250,633

TAZ CODE 294

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	469.0	469	469	1,459	1,459	0
RM	Residential-Med. Density	4	20.0	20	20	62	62	0
CC	Community Commercial	12	13.1	0	0	0	0	143,204
M	Manufacturing	22	4.3	0	0	0	0	74,923
OS	Open Space	99	42.4	0	0	0	0	0
XXX	I-10 Freeway	99	16.0	0	0	0	0	0
TAZ 294	Sub-Total			489	489	1,521	1,521	218,127

TAZ CODE 295

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CC	Community Commercial	12	14.4	0	0	0	0	157,469
M	Manufacturing	22	76.2	0	0	0	0	1,328,754
OS	Open Space	99	36.3	0	0	0	0	0
XXX	I-10 Freeway	99	13.5	0	0	0	0	0
TAZ 295	Sub-Total			0	0	0	0	1,486,223

TAZ CODE 296

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	64.0	64	64	199	199	0
RL	Residential-Low Density	3	170.0	170	170	529	529	0
RM	Residential-Med. Density	4	367.0	214	367	666	1,141	0
CC	Community Commercial	12	8.6	0	0	0	0	93,872
TAZ 296	Sub-Total			448	601	1,394	1,869	93,872

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 297

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	99.0	99	99	308	308	0
RL	Residential-Low Density	3	162.0	162	162	504	504	0
CC	Community Commercial	12	31.7	0	0	0	0	345,649
TAZ 297	Sub-Total			261	261	812	812	345,649

TAZ CODE 298

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	286.0	286	286	889	889	0
P	Public Facilities	99	1.9	0	0	0	0	0
OS	Open Space	99	3.9	0	0	0	0	0
TAZ 298	Sub-Total			286	286	889	889	0

TAZ CODE 299

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	834.0	834	834	2,594	2,594	0
RL	Residential-Low Density	3	301.0	301	301	936	936	0
RM	Residential-Med. Density	4	53.0	53	53	165	165	0
CO	Commercial Office	16	1.6	0	0	0	0	24,394
P	Public Facilities	99	9.2	0	0	0	0	0
TAZ 299	Sub-Total			1,188	1,188	3,695	3,695	24,394

TAZ CODE 300

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	89.0	89	89	277	277	0
CC	Community Commercial	12	27.0	0	0	0	0	294,139
P	Public Facilities	99	40.1	0	0	0	0	0
TAZ 300	Sub-Total			89	89	277	277	294,139

TAZ CODE 301

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

RH	Residential-High Density	6	88.0	88	88	274	274	0
CC	Community Commercial	12	50.1	0	0	0	0	546,025
CO	Commercial Office	16	10.3	0	0	0	0	157,186
TAZ 301	Sub-Total			88	88	274	274	703,211

TAZ CODE 302

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	295.0	295	295	917	917	0
RM	Residential-Med. Density	4	449.0	312	449	970	1,396	0
CO	Commercial Office	16	56.1	0	0	0	0	855,301
NC	Neighborhood Commercial	11	17.7	0	0	0	0	193,624
TAZ 302	Sub-Total			607	744	1,887	2,313	1,048,925

TAZ CODE 303

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	135.0	29	135	90	420	0
RH	Residential-High Density	6	482.0	482	482	1,499	1,499	0
RL	Residential-Low Density	3	156.0	156	156	485	485	0
RM	Residential-Med. Density	4	1,411.0	823	1,411	2,560	4,388	0
TAZ 303	Sub-Total			1,490	2,184	4,634	6,792	0

TAZ CODE 304

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	884.0	189	884	588	2,749	0
TAZ 304	Sub-Total			189	884	588	2,749	0

TAZ CODE 305

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	572.0	123	572	383	1,779	0
TAZ 305	Sub-Total			123	572	383	1,779	0

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 306

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	457.0	98	457	305	1,421	0
NC	Neighborhood Commercial	11	11.5	0	0	0	0	125,671
TAZ 306	Sub-Total			98	457	305	1,421	125,671

TAZ CODE 307

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	491.0	105	491	327	1,527	0
TAZ 307	Sub-Total			105	491	327	1,527	0

TAZ CODE 308

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	548.0	117	548	364	1,704	0
TAZ 308	Sub-Total			117	548	364	1,704	0

TAZ CODE 309

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	111.0	24	111	75	345	0
RL	Residential-Low Density	3	130.0	130	130	404	404	0
P	Public Facilities	99	6.3	0	0	0	0	0
TAZ 309	Sub-Total			154	241	479	749	0

TAZ CODE 310

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	294.0	294	294	914	914	0
MU(SP-3)	Mixed Use (Specific Plan)	50	30.2	136	136	423	423	230,215
TAZ 310	Sub-Total			430	430	1,337	1,337	230,215

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 311

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	412.0	240	412	746	1,281	0
P	Public Facilities	99	5.6	0	0	0	0	0
MU(SP-3)	Mixed Use (Specific Plan)	50	29.2	132	132	411	411	223,278
TAZ 311	Sub-Total			372	544	1,157	1,692	223,278

TAZ CODE 312

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	6	344.0	344	344	1,070	1,070	0
RL	Residential-Low Density	3	59.0	59	59	183	183	0
RM	Residential-Med. Density	4	273.0	159	273	494	849	0
MU(SP-3)	Mixed Use (Specific Plan)	50	14.7	67	67	208	208	112,668
TAZ 312	Sub-Total			629	743	1,955	2,310	112,668

TAZ CODE 313

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	130.0	130	130	404	404	0
RM	Residential-Med. Density	4	260.0	151	260	470	809	0
P	Public Facilities	99	6.3	0	0	0	0	0
MU(SP-3)	Mixed Use (Specific Plan)	50	12.9	58	58	180	180	98,489
TAZ 313	Sub-Total			339	448	1,054	1,393	98,489

TAZ CODE 314

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	494.0	494	494	1,536	1,536	0
P	Public Facilities	99	19.2	0	0	0	0	0
OS	Open Space	99	6.4	0	0	0	0	0
TAZ 314	Sub-Total			494	494	1,536	1,536	0

TAZ CODE 315

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

RH	Residential-High Density	6	271.0	271	271	843	843	0
RL	Residential-Low Density	3	439.0	439	439	1,365	1,365	0
RM	Residential-Med. Density	4	58.0	34	58	106	180	0
P	Public Facilities	99	3.3	0	0	0	0	0
OS	Open Space	99	20.0	0	0	0	0	0
TAZ 315	Sub-Total			744	768	2,314	2,388	0

TAZ CODE 316

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	515.0	515	515	1,602	1,602	0
OS	Open Space	99	58.6	0	0	0	0	0
TAZ 316	Sub-Total			515	515	1,602	1,602	0

TAZ CODE 317

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	164.0	164	164	510	510	0
OS	Open Space	99	8.9	0	0	0	0	0
MU(SP-3)	Mixed Use (Specific Plan)	50	28.0	126	126	392	392	213,978
TAZ 317	Sub-Total			290	290	902	902	213,978

TAZ CODE 318

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RL	Residential-Low Density	3	284.0	284	284	883	883	0
RM	Residential-Med. Density	4	386.0	225	386	700	1,200	0
P	Public Facilities	99	11.1	0	0	0	0	0
MU(SP-3)	Mixed Use (Specific Plan)	50	34.5	155	155	482	482	263,375
TAZ 318	Sub-Total			664	825	2,065	2,565	263,375

TAZ CODE 319

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	507.0	507	507	1,577	1,577	0
MU(SP-3)	Mixed Use (Specific Plan)	50	67.3	303	303	942	942	513,409
TAZ 319	Sub-Total			810	810	2,519	2,519	513,409

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INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 320

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RM	Residential-Med. Density	4	1,297.0	757	1,297	2,354	4,034	0
MU(SP-3)	Mixed Use (Specific Plan)	50	28.8	130	130	404	404	220,228
TAZ 320	Sub-Total			887	1,427	2,758	4,438	220,228

TAZ CODE 321

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	121.0	26	121	81	376	0
RL	Residential-Low Density	3	413.0	413	413	1,284	1,284	0
P	Public Facilities	99	1.6	0	0	0	0	0
TAZ 321	Sub-Total			439	534	1,365	1,660	0

TAZ CODE 322

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	257.0	55	257	171	799	0
RL	Residential-Low Density	3	287.0	287	287	893	893	0
TAZ 322	Sub-Total			342	544	1,064	1,692	0

TAZ CODE 323

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	660.0	142	660	442	2,053	0
P	Public Facilities	99	9.0	0	0	0	0	0
TAZ 323	Sub-Total			142	660	442	2,053	0

TAZ CODE 324

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	2	445.0	95	445	295	1,384	0
NC	Neighborhood Commercial	11	15.1	0	0	0	0	165,419
TAZ 324	Sub-Total			95	445	295	1,384	165,419

Table A-2

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Traffic Analysis Zone

TAZ CODE 336

GP	General Plan Designation	Code	Units (Traffic)	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
MU(SP-3	Mixed Use (Specific Plan)	50	12.8	58	58	180	180	97,956
TAZ 336	Sub-Total			58	58	180	180	97,956
Planning Area Totals				52,298	67,118	162,647	208,729	35,055,886

Note: Some acreage values may not total correctly due to rounding.

Table A-3

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Redevelopment Area

Redevelopment Area:								
GP	General Plan Designation	Acres	Mod. Gross Acres	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
CE	County Estates	3,348.1	3,013.3	2,260	10,547	7,030	32,801	0
EE	Equestrian Estates	709.5	638.6	958	958	2,980	2,980	0
RH	Residential-High Density	121.5	109.3	1,640	1,640	5,100	5,100	0
RL	Residential-Low Density	6,206.6	5,585.9	22,346	25,801	69,497	80,238	0
RM	Residential-Med. Density	1,175.5	1,058.0	7,405	10,301	23,027	32,034	0
CC	Community Commercial	405.5	324.4	0	0	0	0	3,533,262
CO	Commercial Office	99.2	79.4	0	0	0	0	1,210,838
NC	Neighborhood Commercial	111.2	89.0	0	0	0	0	969,319
BP	Business Park	451.6	361.2	0	0	0	0	5,508,227
IP	Industrial Park	109.4	87.5	0	0	0	0	1,526,168
M	Manufacturing	190.6	130.7	0	0	0	0	2,278,188
P	Public Facilities	757.7	682.0	0	0	0	0	0
OS	Open Space	5,998.6	5,998.6	0	0	0	0	0
RR	Resource Recovery	1,057.4	1,057.4	0	0	0	0	0
MU(DA)	Mixed Use (Dev Agreement)	432.9	346.3	1,039	1,039	3,231	3,231	3,621,300
MU(SP-100)	Mixed Use (Specific Plan)	128.3	102.6	462	462	1,437	1,437	939,093
MU(SP-200)	Mixed Use (Specific Plan)	265.1	212.1	954	954	2,967	2,967	1,940,664
MU(SP-300)	Mixed Use (Specific Plan)	280.7	224.6	1,010	1,010	3,140	3,140	2,054,643
VC	Village Core	90.4	72.3	543	724	1,689	2,251	236,433
SP-231	SP-231: Adams 34	597.1	537.4	941	941	2,927	2,927	67,845
SP-281	SP-281: Del Webb	1,452.5	1,307.2	5,745	5,745	17,866	17,866	549,901
XXX	I-10 Freeway	100.4	100.4	0	0	0	0	0
Sub-Totals		24,091.0	22,119.3	45,303	60,122	140,891	186,972	24,435,881

Table A-3

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Redevelopment Area

Redevelopment Area: DATE CAPITAL

GP	General Plan Designation	Acres	Mod. Gross Acres	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	236.6	213.0	3,197	3,197	9,944	9,944	0
RL	Residential-Low Density	460.7	414.6	1,659	1,659	5,159	5,159	0
RM	Residential-Med. Density	153.4	138.1	967	967	3,007	3,007	0
CC	Community Commercial	251.9	201.5	0	0	0	0	2,194,989
CO	Commercial Office	25.4	20.3	0	0	0	0	310,104
NC	Neighborhood Commercial	2.6	2.0	0	0	0	0	22,651
RC	Regional Commercial	48.9	39.1	0	0	0	0	597,186
BP	Business Park	15.9	12.7	0	0	0	0	194,691
IP	Industrial Park	110.3	88.3	0	0	0	0	1,538,539
P	Public Facilities	220.4	198.4	0	0	0	0	0
OS	Open Space	9.9	9.9	0	0	0	0	0
MU(SP-300	Mixed Use (Specific Plan)	56.2	44.9	203	203	631	631	411,460
Sub-Totals		1,592.6	1,383.2	6,026	6,026	18,741	18,741	5,269,620

Table A-3

INDIO GENERAL PLAN - 2020
Summary of Land Use Designations by Redevelopment Area

Redevelopment Area: **INDIO CENTRE**

GP	General Plan Designation	Acres	Mod. Gross Acres	Base Units	Max. Units	Base Pop.	Max. Pop.	Maximum Sq. Ft.
RH	Residential-High Density	12.3	11.1	167	167	519	519	0
RL	Residential-Low Density	57.9	52.1	208	208	647	647	0
RM	Residential-Med. Density	21.7	19.6	137	137	426	426	0
CC	Community Commercial	126.1	100.8	0	0	0	0	1,098,474
CO	Commercial Office	3.8	3.0	0	0	0	0	46,653
DC	Downtown Commerce	128.3	102.6	461	461	1,434	1,434	782,654
BP	Business Park	38.7	31.0	0	0	0	0	472,931
IP	Industrial Park	210.3	168.3	0	0	0	0	2,932,808
M	Manufacturing	214.7	89.0	0	0	0	0	1,551,084
P	Public Facilities	43.1	38.8	0	0	0	0	0
OS	Open Space	23.1	23.1	0	0	0	0	0
Sub-Totals		880.4	639.7	973	973	3,026	3,026	6,884,604
<hr/>								
Planning Area Totals		26,564.1	24,142.3	52,302	67,121	162,658	208,739	36,590,105

Note: Some acreage values may not total correctly due to rounding.

ASSUMPTIONS USED TO CALCULATE BUILDOUT PROJECTIONS

Table 3.1-1 provides a tabular summary that illustrates the acres and potential development intensity for each land use designation proposed in the Planning Area. For ease of review, this table has been duplicated as Table A-1 in this appendix and will be used in the following discussion.

It is not expected that this number of housing units or total square footage shown on Table A-1 will ever be developed because the entire Planning Area will neither develop at a maximum allowed intensity, nor will developed areas be redeveloped to meet the total allowed intensity. These numbers have been presented to provide illustrative numbers to help the City understand what the potential upper limits of development are within the Planning Area.

Since intensity is based on a modified gross acreage (MGA), this has been calculated on Table A-1 by multiplying gross acres by 0.9 for residential, specific plans, and public designations; 0.8 for commercial, industrial, and mixed use designations; 0.4 for manufacturing (to factor out the railroad lines); and 1.0 for the other categories. The results are shown in the column labeled "Mod. Gross Acres" on Table A-1. From the MGA, projections were made on the number of housing units and square footage of commercial, office, and industrial uses that could be built.

For designations containing residential components, the number of "Base Units" and "Max. Units" were calculated by taking the MGA and multiplying it by the an average development expectancy based on the threshold and maximum densities for each designation, respectively. The following table shows the densities assumed for each category. For the MU(SP) categories, an average residential participation of 30 percent was assumed, and 20 percent of the MU(DA) acreage was assumed to be residential. These percentages are assumptions of the average residential component, and do not set quotas or performance standards for these designations. The base population and maximum population were calculated by multiplying the base and maximum units, respectively, by 3.11 persons per unit (1990 census).

Designation	Allowed by GP		Assumed	
	Thres.	Max.	Base	Max.
EE	0 - 2.0	2.0	1.5	2.0
CE	0 - 3.0	3.5	0.75	3.5
RL	3.5	5.0	4.0	5.0
RM	6.0	8.0	7.0	10.0
RH	10.0	20.0	15.0	20.0
MU(DA)	10.0	20.0	15.0	15.0
MU(SP)	10.0	20.0	15.0	15.0

The "Max." values shown are based on being in an RPD area.

The final category on the table is maximum square footage. This was calculated by multiplying the MGA by an assumed average lot coverage. Based on current and projected development trends, it was assumed that the average lot coverage was equal to the floor-area ratio for each designation (i.e., the vast majority of development will be single-story in design). The following table shows the lot coverages (floor-area ratios) assumed in the analysis. As with residential, for the MU(SP) categories, an average commercial/business park participation of 70 percent was assumed, and 80 percent of the MU(DA) acreage was assumed to be commercial/business park. These percentages are assumptions of the average commercial/business park component, and do not set quotas or performance standards for these designations.

Designation	Allowed in GP	Assumed Average
NC, CC	30%, 30%	25%
RC, CO	40%, 40%	35%
DC	No limit	60%
BP	40%	35%
IP, M	50%, No limit	40%
MU (both)	30% to 40%	30%
VC	30%	25%

Residential units and square footage within approved specific plans is based on the actual approved intensities.

APPENDIX B
CIRCULATION

APPENDIX B - CIRCULATION

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Draft General Plan - Traffic Study

APPENDIX A
EXISTING CONDITIONS LAND USE
AND TRIP GENERATION BY ZONE

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
<hr/>						
30	3	417.00	10.0	4170	3420	750
30	4	118.00	8.0	943	802	141
30	7	392.00	4.0	1568	1019	549
30	8	194.00	3.0	582	407	175
30	15	14.00	100.0	1400	378	1022
<hr/>						
Sub Total				8663	6026	2637
<hr/>						
31	12	23.58	500.0	11791	2358	9433
31	16	43.89	240.0	10531	2106	8425
<hr/>						
Sub Total				22322	4464	17858
<hr/>						
32	3	336.00	10.0	3359	2755	604
32	4	205.00	8.0	1640	1394	246
32	6	229.00	6.0	1376	1169	207
32	7	415.00	4.0	1660	1079	581
32	13	20.83	360.0	7499	1725	5774
32	16	11.22	240.0	2693	539	2154
<hr/>						
Sub Total				18227	8661	9566
<hr/>						
33	3	18.00	10.0	181	148	33
33	4	68.00	8.0	543	462	81
33	7	225.00	4.0	900	585	315
33	13	53.07	360.0	19105	4394	14711
33	16	11.14	240.0	2674	535	2139
33	33	0.29	500.0	145	29	116
<hr/>						
Sub Total				23548	6153	17395
<hr/>						
34	3	226.00	10.0	2259	1853	406
34	7	199.00	4.0	795	517	278
34	11	2.47	700.0	1729	380	1349
34	14	0.49	300.0	148	40	108
34	12	18.00	500.0	9000	1800	7200
34	16	17.90	240.0	4296	859	3437
<hr/>						
Sub Total				18227	5449	12778
<hr/>						
35	3	140.00	10.0	1400	1148	252
35	7	75.00	4.0	300	195	105
35	33	8.70	500.0	4349	870	3479
<hr/>						
Sub Total				6049	2213	3836

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
37	2	33.00	10.0	330	270	60
37	4	234.00	8.0	1873	1592	281
37	5	276.00	7.0	1933	1643	290
37	7	561.00	4.0	2244	1459	785
37	8	501.00	3.0	1503	1052	451
37	11	1.37	700.0	960	211	749
37	12	8.94	500.0	4470	894	3576
Sub Total				13313	7121	6192
38	7	119.00	4.0	475	309	166
38	8	221.00	3.0	663	464	199
38	41	15.30	8.0	121	24	97
Sub Total				1259	797	462
39	1	1.00	12.0	12	10	2
39	3	36.00	10.0	359	295	64
39	7	238.00	4.0	953	619	334
39	8	405.00	3.0	1217	852	365
Sub Total				2541	1776	765
40	1	1.00	12.0	12	10	2
40	2	40.00	10.0	400	328	72
40	7	21.00	4.0	85	55	30
Sub Total				497	393	104
41	3	84.00	10.0	841	689	152
41	7	195.00	4.0	780	507	273
41	12	9.07	500.0	4536	907	3629
Sub Total				6157	2103	4054
42	3	90.00	10.0	900	738	162
42	7	330.00	4.0	1320	858	462
42	8	192.00	3.0	577	404	173
Sub Total				2797	2000	797
43	3	467.00	10.0	4670	3830	840
Sub Total				4670	3830	840
44	3	207.00	10.0	2070	1698	372
44	7	181.00	4.0	725	471	254
Sub Total				2795	2169	626

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
45	1	5.00	12.0	59	49	10
45	7	2.00	4.0	8	5	3
Sub Total				67	54	13
46	7	383.00	4.0	1532	996	536
46	8	710.00	3.0	2130	1491	639
46	41	80.80	8.0	646	129	517
Sub Total				4308	2616	1692
49	1	1.00	12.0	12	10	2
Sub Total				12	10	2
50	12	43.17	500.0	21586	4317	17269
Sub Total				21586	4317	17269
54	7	82.00	4.0	327	213	114
54	8	151.00	3.0	453	317	136
54	41	91.60	8.0	733	147	586
Sub Total				1513	677	836
55	7	237.00	4.0	947	616	331
55	8	439.00	3.0	1318	923	395
55	43	166.50	1.0	166	33	133
Sub Total				2431	1572	859
57	7	1.00	4.0	5	3	2
57	8	1.00	3.0	3	2	1
57	15	75.90	100.0	7589	2049	5540
57	41	241.12	8.0	1929	386	1543
Sub Total				9526	2440	7086
58	3	358.00	10.0	3581	2936	645
58	7	264.00	4.0	1056	686	370
58	8	134.00	3.0	401	281	120
Sub Total				5038	3903	1135
59	7	109.00	4.0	435	283	152
Sub Total				435	283	152

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
60	20	26.12	180.0	4701	1034	3667
Sub Total				4701	1034	3667
61	2	22.00	10.0	219	180	39
61	4	391.00	8.0	3127	2658	469
61	7	223.00	4.0	892	580	312
61	20	38.60	180.0	6949	1529	5420
61	21	41.60	110.0	4576	1007	3569
Sub Total				15763	5954	9809
63	2	19.00	10.0	190	156	34
63	3	314.00	10.0	3141	2575	566
63	4	182.00	8.0	1457	1238	219
63	7	277.00	4.0	1108	720	388
63	30	20.50	60.0	1230	123	1107
63	34	5.72	90.0	515	103	412
63	40	10.00	40.0	400	60	340
Sub Total				8041	4975	3066
64	3	47.00	10.0	470	386	84
64	7	26.00	4.0	105	68	37
Sub Total				575	454	121
65	7	99.00	4.0	395	257	138
65	8	184.00	3.0	552	386	166
65	41	161.00	8.0	1289	258	1031
Sub Total				2236	901	1335
66	2	2.00	10.0	19	16	3
66	3	389.00	10.0	3890	3190	700
66	4	273.00	8.0	2184	1856	328
66	7	357.00	4.0	1427	928	499
66	16	14.31	240.0	3435	687	2748
Sub Total				10955	6677	4278

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
67	3	1039.00	10.0	10390	8520	1870
67	4	544.00	8.0	4354	3700	654
67	7	853.00	4.0	3412	2218	1194
67	12	16.06	500.0	8030	1606	6424
67	16	19.67	240.0	4720	944	3776
67	34	4.61	90.0	415	83	332
67	40	1.60	40.0	65	10	55
Sub Total				31386	17081	14305
68	1	1.00	12.0	12	10	2
68	3	78.00	10.0	781	640	141
68	7	43.00	4.0	173	112	61
68	13	11.79	360.0	4244	976	3268
Sub Total				5210	1738	3472
69	3	4.00	10.0	41	33	8
69	7	56.00	4.0	225	146	79
69	8	100.00	3.0	300	210	90
69	20	7.31	180.0	1315	289	1026
69	41	72.20	8.0	579	116	463
Sub Total				2460	794	1666
70	2	12.00	10.0	119	98	21
70	3	90.00	10.0	900	738	162
70	7	103.00	4.0	412	268	144
70	8	90.00	3.0	270	189	81
70	41	441.38	8.0	3531	706	2825
Sub Total				5232	1999	3233
71	3	60.00	10.0	600	492	108
71	7	180.00	4.0	720	468	252
71	8	272.00	3.0	817	572	245
71	41	73.80	8.0	590	118	472
Sub Total				2727	1650	1077
72	11	0.27	700.0	190	42	148
Sub Total				190	42	148
73	3	417.00	10.0	4170	3420	750
73	7	224.00	4.0	895	582	313
73	41	193.47	8.0	1549	310	1239
Sub Total				6614	4312	2302

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
74	7	138.00	4.0	553	359	194
74	8	257.00	3.0	771	540	231
Sub Total				1324	899	425
75	7	214.00	4.0	856	556	300
75	8	397.00	3.0	1191	834	357
75	41	36.06	8.0	289	58	231
Sub Total				2336	1448	888
76	7	86.00	4.0	344	224	120
76	8	161.00	3.0	483	338	145
Sub Total				827	562	265
77	7	70.00	4.0	280	182	98
77	8	131.00	3.0	393	275	118
77	41	12.60	8.0	100	20	80
Sub Total				773	477	296
80	7	323.00	4.0	1292	840	452
80	8	599.00	3.0	1798	1259	539
Sub Total				3090	2099	991
81	7	493.00	4.0	1973	1282	691
81	8	915.00	3.0	2747	1923	824
81	43	240.60	1.0	240	48	192
Sub Total				4960	3253	1707
83	3	170.00	10.0	1700	1394	306
83	5	208.00	7.0	1457	1238	219
83	7	203.00	4.0	812	528	284
83	11	7.56	700.0	5292	1164	4128
Sub Total				9261	4324	4937
84	3	162.00	10.0	1619	1328	291
84	7	87.00	4.0	347	226	121
Sub Total				1966	1554	412

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
-----	-----	-----	-----	-----	-----	-----
85	2	11.00	10.0	110	90	20
85	3	24.00	10.0	241	197	44
85	7	19.00	4.0	75	49	26
85	11	2.58	700.0	1805	397	1408
		Sub Total		2231	733	1498
86	7	176.00	4.0	705	458	247
86	8	328.00	3.0	983	688	295
		Sub Total		1688	1146	542
87	3	164.00	10.0	1641	1345	296
87	8	454.00	3.0	1362	953	409
87	7	333.00	4.0	1332	866	466
87	12	15.90	500.0	7950	1590	6360
		Sub Total		12285	4754	7531
88	3	178.00	10.0	1781	1460	321
88	7	96.00	4.0	385	250	135
88	33	0.17	500.0	85	17	68
88	43	34.00	1.0	34	7	27
		Sub Total		2285	1734	551
89	2	9.00	10.0	90	74	16
89	3	53.00	10.0	530	434	96
89	7	33.00	4.0	132	86	46
89	34	2.10	90.0	189	38	151
		Sub Total		941	632	309
90	3	216.00	10.0	2159	1771	388
90	7	117.00	4.0	468	304	164
		Sub Total		2627	2075	552
91	2	3.00	10.0	30	24	6
91	3	19.00	10.0	190	156	34
91	7	12.00	4.0	47	31	16
		Sub Total		267	211	56
92	3	48.00	10.0	481	394	87
92	7	435.00	4.0	1740	1131	609
92	8	761.00	3.0	2283	1598	685
		Sub Total		4504	3123	1381

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
93	3	66.00	10.0	659	541	118
93	7	36.00	4.0	144	94	50
Sub Total				803	635	168
94	2	12.00	10.0	119	98	21
94	7	6.00	4.0	25	16	9
Sub Total				144	114	30
95	3	33.00	10.0	330	270	60
95	7	83.00	4.0	332	216	116
95	8	123.00	3.0	370	259	111
Sub Total				1032	745	287
96	3	59.00	10.0	590	484	106
96	7	32.00	4.0	127	83	44
Sub Total				717	567	150
98	43	71.97	1.0	71	14	57
Sub Total				71	14	57
100	1	1.00	12.0	12	10	2
Sub Total				12	10	2
102	7	27.00	4.0	108	70	38
102	8	50.00	3.0	149	105	44
Sub Total				257	175	82
103	3	18.00	10.0	181	148	33
103	7	10.00	4.0	40	26	14
103	41	5.12	8.0	40	8	32
Sub Total				261	182	79
106	3	174.00	10.0	1741	1427	314
106	7	94.00	4.0	375	244	131
Sub Total				2116	1671	445
107	1	1.00	12.0	12	10	2
107	7	1.00	4.0	5	3	2
Sub Total				17	13	4

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
108	20	18.41	180.0	3314	729	2585
108	43	19.39	1.0	20	4	16
Sub Total				3334	733	2601
109	2	7.00	10.0	70	58	12
109	3	56.00	10.0	559	459	100
109	7	34.00	4.0	135	88	47
109	11	0.92	700.0	645	142	503
Sub Total				1409	747	662
112	3	123.00	10.0	1230	1008	222
112	7	66.00	4.0	265	172	93
112	8	10.00	3.0	30	21	9
112	15	1.74	100.0	174	47	127
Sub Total				1699	1248	451
113	3	9.00	10.0	90	74	16
113	7	145.00	4.0	580	377	203
113	8	259.00	3.0	779	545	234
113	41	72.71	8.0	581	116	465
Sub Total				2030	1112	918
114	2	5.00	10.0	48	40	8
114	3	241.00	10.0	2410	1976	434
114	7	131.00	4.0	525	341	184
Sub Total				2983	2357	626
115	3	27.00	10.0	270	222	48
115	7	14.00	4.0	56	36	20
Sub Total				326	258	68
116	2	1.00	10.0	10	8	2
116	3	585.00	10.0	5848	4796	1052
116	7	315.00	4.0	1260	819	441
116	12	2.00	500.0	1000	200	800
Sub Total				8118	5823	2295
117	2	1.00	10.0	10	8	2
117	16	22.05	240.0	5291	1058	4233
117	32	64.21	4.0	256	64	192
Sub Total				5557	1130	4427

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
118	1	7.00	12.0	85	69	16
118	7	4.00	4.0	15	10	5
Sub Total				100	79	21
119	34	1.67	90.0	151	30	121
119	43	29.63	1.0	29	6	23
Sub Total				180	36	144
120	43	56.02	1.0	55	11	44
Sub Total				55	11	44
121	1	1.00	12.0	12	10	2
121	5	7.00	7.0	47	41	6
Sub Total				59	51	8
122	1	31.00	12.0	371	305	66
Sub Total				371	305	66
123	2	1.00	10.0	10	8	2
123	22	1.87	70.0	131	29	102
123	43	156.27	1.0	155	31	124
Sub Total				296	68	228
124	1	27.00	12.0	324	266	58
124	2	38.00	10.0	381	312	69
124	43	69.26	1.0	69	14	55
Sub Total				774	592	182
125	1	11.00	12.0	132	108	24
125	43	91.25	1.0	91	18	73
Sub Total				223	126	97
126	1	27.00	12.0	324	266	58
126	2	2.00	10.0	19	16	3
126	43	30.26	1.0	31	6	25
Sub Total				374	288	86
128	1	4.00	12.0	47	39	8
Sub Total				47	39	8

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
129	1	4.00	12.0	47	39	8
Sub Total				47	39	8
130	1	43.00	12.0	515	423	92
130	2	66.00	10.0	659	541	118
130	12	3.34	500.0	1670	334	1336
130	43	18.69	1.0	19	4	15
Sub Total				2863	1302	1561
131	1	1.00	12.0	12	10	2
Sub Total				12	10	2
132	1	17.00	12.0	203	167	36
132	12	4.24	500.0	2120	424	1696
Sub Total				2323	591	1732
133	3	5.00	10.0	48	40	8
133	7	2.00	4.0	8	5	3
Sub Total				56	45	11
136	43	62.60	1.0	63	13	50
Sub Total				63	13	50
140	43	310.30	1.0	311	62	249
Sub Total				311	62	249
144	12	2.68	500.0	1340	268	1072
144	40	25.95	40.0	1039	156	883
144	21	15.45	110.0	1700	374	1326
144	43	342.62	1.0	343	69	274
Sub Total				4422	867	3555
146	1	1.00	12.0	12	10	2
146	43	241.00	1.0	240	48	192
Sub Total				252	58	194

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
148	1	1.00	12.0	12	10	2
148	2	3.00	10.0	30	24	6
148	7	2.00	4.0	8	5	3
Sub Total				50	39	11
150	2	14.00	10.0	141	115	26
150	7	7.00	4.0	27	18	9
Sub Total				168	133	35
151	7	45.00	4.0	180	117	63
151	8	83.00	3.0	249	175	74
Sub Total				429	292	137
153	7	13.00	4.0	53	34	19
153	8	25.00	3.0	77	54	23
Sub Total				130	88	42
155	7	558.00	4.0	2232	1451	781
155	8	1035.00	3.0	3107	2175	932
Sub Total				5339	3626	1713
156	11	0.94	700.0	658	145	513
Sub Total				658	145	513
157	1	1.00	12.0	12	10	2
157	2	18.00	10.0	181	148	33
157	3	514.00	10.0	5141	4215	926
157	4	147.00	8.0	1177	1000	177
157	5	486.00	7.0	3402	2892	510
157	7	842.00	4.0	3368	2189	1179
157	8	397.00	3.0	1191	834	357
157	12	11.62	500.0	5809	1162	4647
157	16	21.62	240.0	5189	1038	4151
157	34	0.46	90.0	41	8	33
Sub Total				25511	13496	12015
160	11	0.69	700.0	482	106	376
160	15	1.86	100.0	186	50	136
160	21	2.42	110.0	267	59	208
Sub Total				935	215	720

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
161	1	1.00	12.0	12	10	2
Sub Total				12	10	2
163	1	11.00	12.0	132	108	24
Sub Total				132	108	24
165	1	3.00	12.0	37	30	7
165	43	83.21	1.0	83	17	66
Sub Total				120	47	73
166	5	59.00	7.0	413	351	62
Sub Total				413	351	62
167	43	42.51	1.0	43	9	34
Sub Total				43	9	34
168	1	11.00	12.0	132	108	24
168	43	144.83	1.0	145	29	116
Sub Total				277	137	140
169	1	2.00	12.0	24	20	4
169	43	154.19	1.0	154	31	123
Sub Total				178	51	127
170	1	2.00	12.0	24	20	4
170	43	121.63	1.0	121	24	97
Sub Total				145	44	101
171	22	1.50	70.0	105	23	82
Sub Total				105	23	82
172	1	2.00	12.0	24	20	4
172	43	96.43	1.0	95	19	76
Sub Total				119	39	80
173	1	4.00	12.0	47	39	8
173	43	156.18	1.0	155	31	124
Sub Total				202	70	132

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
174	1	4.00	12.0	47	39	8
174	43	162.05	1.0	161	32	129
Sub Total				208	71	137
175	43	173.55	1.0	174	35	139
Sub Total				174	35	139
176	43	76.08	1.0	75	15	60
Sub Total				75	15	60
177	43	314.69	1.0	315	63	252
Sub Total				315	63	252
178	43	93.50	1.0	94	19	75
Sub Total				94	19	75
179	1	1.00	12.0	12	10	2
179	43	144.42	1.0	145	29	116
Sub Total				157	39	118
180	1	1.00	12.0	12	10	2
180	43	159.51	1.0	160	32	128
Sub Total				172	42	130
181	43	101.59	1.0	101	20	81
Sub Total				101	20	81
182	43	92.22	1.0	91	18	73
Sub Total				91	18	73
183	43	167.26	1.0	166	33	133
Sub Total				166	33	133
184	43	137.37	1.0	137	27	110
Sub Total				137	27	110

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
185	43	35.75	1.0	35	7	28
Sub Total				35	7	28
189	43	131.72	1.0	131	26	105
Sub Total				131	26	105
190	1	2.00	12.0	24	20	4
190	7	27.00	4.0	108	70	38
190	43	61.62	1.0	61	12	49
Sub Total				193	102	91
191	4	14.00	8.0	113	96	17
191	43	152.22	1.0	151	30	121
Sub Total				264	126	138
192	2	6.00	10.0	59	49	10
Sub Total				59	49	10
194	1	2.00	12.0	24	20	4
Sub Total				24	20	4
198	43	119.05	1.0	120	24	96
Sub Total				120	24	96
199	4	230.00	8.0	1840	1564	276
199	7	1.00	4.0	5	3	2
Sub Total				1845	1567	278
200	4	1.00	8.0	7	6	1
Sub Total				7	6	1
201	7	149.00	4.0	595	387	208
201	11	3.34	700.0	2337	514	1823
201	15	2.16	100.0	216	58	158
201	43	115.56	1.0	115	23	92
Sub Total				3263	982	2281

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
202	7	361.00	4.0	1444	939	505
202	43	79.39	1.0	80	16	64
Sub Total				1524	955	569
203	7	1.00	4.0	5	3	2
Sub Total				5	3	2
209	43	81.19	1.0	81	16	65
Sub Total				81	16	65
210	43	125.97	1.0	126	25	101
Sub Total				126	25	101
211	7	10.00	4.0	40	26	14
211	11	4.96	700.0	3472	764	2708
211	14	1.85	300.0	556	150	406
Sub Total				4068	940	3128
212	1	2.00	12.0	24	20	4
212	11	5.83	700.0	4082	898	3184
212	22	1.17	70.0	82	18	64
Sub Total				4188	936	3252
213	11	0.55	700.0	386	85	301
213	43	79.54	1.0	80	16	64
Sub Total				466	101	365
214	1	6.00	12.0	71	59	12
214	43	44.11	1.0	45	9	36
Sub Total				116	68	48
215	1	2.00	12.0	24	20	4
215	43	91.17	1.0	91	18	73
Sub Total				115	38	77
221	43	78.96	1.0	80	16	64
Sub Total				80	16	64

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
222	11	1.70	700.0	1190	262	928
222	43	137.99	1.0	139	28	111
Sub Total				1329	290	1039
223	33	2.15	500.0	1075	215	860
223	43	102.31	1.0	101	20	81
Sub Total				1176	235	941
224	1	2.00	12.0	24	20	4
224	43	176.89	1.0	177	35	142
Sub Total				201	55	146
225	1	1.00	12.0	12	10	2
225	43	78.40	1.0	79	16	63
Sub Total				91	26	65
226	16	7.70	240.0	1849	370	1479
226	43	324.81	1.0	325	65	260
Sub Total				2174	435	1739
227	1	7.00	12.0	85	69	16
227	2	3.00	10.0	30	24	6
227	12	6.68	500.0	3340	668	2672
227	43	149.92	1.0	149	30	119
Sub Total				3604	791	2813
228	2	1.00	10.0	10	8	2
228	22	3.02	70.0	212	47	165
228	43	156.85	1.0	157	31	126
Sub Total				379	86	293
230	1	8.00	12.0	97	79	18
Sub Total				97	79	18
231	22	10.98	70.0	769	169	600
231	43	96.91	1.0	97	19	78
Sub Total				866	188	678

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
232	43	53.56	1.0	54	11	43
Sub Total				54	11	43
233	1	2.00	12.0	24	20	4
233	4	121.00	8.0	967	822	145
233	5	96.00	7.0	673	572	101
233	6	108.00	6.0	646	550	96
233	40	3.16	40.0	126	19	107
233	43	127.98	1.0	129	26	103
Sub Total				2565	2009	556
234	1	2.00	12.0	24	20	4
234	5	4.00	7.0	27	23	4
234	11	1.77	700.0	1240	273	967
234	22	29.29	70.0	2051	451	1600
234	43	71.39	1.0	71	14	57
Sub Total				3413	781	2632
235	4	13.00	8.0	103	88	15
235	11	1.01	700.0	708	156	552
Sub Total				811	244	567
236	1	8.00	12.0	97	79	18
236	11	1.74	700.0	1218	268	950
236	16	3.04	240.0	729	146	583
236	22	17.96	70.0	1258	277	981
236	43	208.24	1.0	209	42	167
Sub Total				3511	812	2699
237	2	5.00	10.0	48	40	8
237	11	3.54	700.0	2478	545	1933
237	22	14.06	70.0	985	217	768
237	43	45.73	1.0	46	9	37
Sub Total				3557	811	2746
238	21	11.09	110.0	1219	268	951
238	43	47.48	1.0	46	9	37
Sub Total				1265	277	988

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n		Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate		
239	1	2.00	12.0	24	4
239	21	0.38	110.0	42	33
Sub Total			66	29	37
240	1	1.00	12.0	12	2
240	11	0.19	700.0	133	104
240	21	20.88	110.0	2297	1792
240	22	21.48	70.0	1504	1173
240	43	46.35	1.0	46	37
Sub Total			3992	884	3108
241	4	153.00	8.0	1223	183
241	5	49.00	7.0	343	51
241	12	10.64	500.0	5320	4256
241	16	2.58	240.0	620	496
241	22	1.82	70.0	127	99
241	34	2.52	90.0	226	181
241	40	4.38	40.0	175	149
Sub Total			8034	2619	5415
242	4	295.00	8.0	2360	354
242	5	74.00	7.0	519	78
242	13	8.95	360.0	3222	2481
242	22	1.95	70.0	136	106
Sub Total			6237	3218	3019
243	3	34.00	10.0	341	62
243	4	288.00	8.0	2303	345
243	5	2.00	7.0	15	2
243	11	5.02	700.0	3514	2741
243	12	9.46	500.0	4730	3784
243	22	5.69	70.0	399	311
243	30	3.99	60.0	240	216
243	33	2.93	500.0	1465	1172
243	40	3.41	40.0	136	116
Sub Total			13143	4394	8749

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
244	3	4.00	10.0	41	33	8
244	4	145.00	8.0	1160	986	174
244	5	144.00	7.0	1007	856	151
244	11	4.27	700.0	2989	658	2331
244	34	1.17	90.0	105	21	84
244	40	26.51	40.0	1060	159	901
Sub Total				6362	2713	3649
245	4	348.00	8.0	2784	2366	418
245	5	85.00	7.0	596	506	90
245	11	2.02	700.0	1414	311	1103
245	22	3.14	70.0	219	48	171
245	30	3.81	60.0	229	23	206
245	40	8.91	40.0	356	53	303
Sub Total				5598	3307	2291
246	4	382.00	8.0	3057	2598	459
246	11	1.49	700.0	1042	229	813
246	30	3.24	60.0	193	19	174
246	34	7.18	90.0	646	129	517
Sub Total				4938	2975	1963
247	4	255.00	8.0	2040	1734	306
247	5	77.00	7.0	539	458	81
247	11	2.08	700.0	1455	320	1135
247	30	3.28	60.0	198	20	178
247	43	12.05	1.0	11	2	9
Sub Total				4243	2534	1709
248	1	1.00	12.0	12	10	2
248	43	152.91	1.0	154	31	123
Sub Total				166	41	125
249	1	4.00	12.0	47	39	8
249	43	99.40	1.0	100	20	80
Sub Total				147	59	88
250	1	6.00	12.0	71	59	12
250	4	6.00	8.0	46	40	6
250	43	155.64	1.0	155	31	124
Sub Total				272	130	142

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
251	4	225.00	8.0	1800	1530	270
251	43	109.69	1.0	109	22	87
Sub Total				1909	1552	357
252	1	5.00	12.0	59	49	10
252	4	11.00	8.0	87	74	13
252	11	2.26	700.0	1582	348	1234
252	15	1.66	100.0	167	45	122
252	43	151.63	1.0	151	30	121
Sub Total				2046	546	1500
253	4	143.00	8.0	1143	972	171
253	11	1.74	700.0	1218	268	950
253	15	4.12	100.0	411	111	300
253	22	1.39	70.0	97	21	76
Sub Total				2869	1372	1497
254	4	1.00	8.0	7	6	1
254	5	46.00	7.0	322	274	48
254	12	8.04	500.0	4020	804	3216
254	14	4.08	300.0	1223	330	893
254	22	6.70	70.0	469	103	366
254	34	0.09	90.0	9	2	7
Sub Total				6050	1519	4531
255	4	160.00	8.0	1280	1088	192
255	5	236.00	7.0	1654	1405	249
255	11	0.27	700.0	190	42	148
255	22	5.24	70.0	367	81	286
255	30	3.19	60.0	191	19	172
Sub Total				3682	2635	1047
256	1	3.00	12.0	37	30	7
256	2	1.00	10.0	10	8	2
256	3	4.00	10.0	41	33	8
256	11	1.33	700.0	932	205	727
256	43	115.61	1.0	115	23	92
Sub Total				1135	299	836
257	2	9.00	10.0	90	74	16
257	43	125.43	1.0	125	25	100
Sub Total				215	99	116

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
258	1	3.00	12.0	37	30	7
258	2	2.00	10.0	19	16	3
258	43	158.64	1.0	159	32	127
Sub Total				215	78	137
259	1	3.00	12.0	37	30	7
259	3	16.00	10.0	159	131	28
259	43	129.86	1.0	129	26	103
Sub Total				325	187	138
260	1	10.00	12.0	119	98	21
260	43	113.68	1.0	114	23	91
Sub Total				233	121	112
261	1	3.00	12.0	37	30	7
261	43	134.50	1.0	135	27	108
Sub Total				172	57	115
262	1	19.00	12.0	229	187	42
262	11	1.30	700.0	910	200	710
262	43	76.58	1.0	75	15	60
Sub Total				1214	402	812
263	1	26.00	12.0	312	256	56
263	34	2.61	90.0	235	47	188
263	43	63.50	1.0	65	13	52
Sub Total				612	316	296
264	1	15.00	12.0	181	148	33
264	5	13.00	7.0	92	78	14
264	43	127.29	1.0	126	25	101
Sub Total				399	251	148
265	2	6.00	10.0	59	49	10
265	43	148.10	1.0	149	30	119
Sub Total				208	79	129
266	5	129.00	7.0	903	768	135
Sub Total				903	768	135

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
267	4	105.00	8.0	840	714	126
267	5	163.00	7.0	1141	970	171
267	11	9.26	700.0	6482	1426	5056
267	21	3.07	110.0	337	74	263
267	30	10.74	60.0	643	64	579
267	33	1.86	500.0	931	186	745
267	34	4.10	90.0	369	74	295
267	40	14.17	40.0	566	85	481
Sub Total				11309	3593	7716
268	3	31.00	10.0	310	254	56
268	4	12.00	8.0	97	82	15
268	11	2.82	700.0	1973	434	1539
268	12	4.21	500.0	2104	421	1683
268	16	3.84	240.0	921	184	737
268	21	2.59	110.0	285	63	222
268	22	1.34	70.0	94	21	73
Sub Total				5784	1459	4325
269	1	2.00	12.0	24	20	4
269	15	1.27	100.0	127	34	93
269	22	15.99	70.0	1119	246	873
269	43	55.46	1.0	55	11	44
Sub Total				1325	311	1014
270	22	6.58	70.0	460	101	359
270	43	76.97	1.0	77	15	62
Sub Total				537	116	421
271	11	4.61	700.0	3228	710	2518
271	20	11.70	180.0	2106	463	1643
271	22	23.77	70.0	1664	366	1298
Sub Total				6998	1539	5459
272	4	19.00	8.0	154	130	24
272	11	1.70	700.0	1190	262	928
272	22	18.17	70.0	1272	280	992
Sub Total				2616	672	1944

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
273	3	26.00	10.0	259	213	46
273	4	295.00	8.0	2360	2006	354
273	5	41.00	7.0	287	244	43
273	11	2.10	700.0	1469	323	1146
273	16	1.89	240.0	454	91	363
273	20	3.34	180.0	601	132	469
273	21	5.38	110.0	591	130	461
273	22	10.29	70.0	719	158	561
273	30	27.80	60.0	1669	167	1502
Sub Total				8409	3464	4945
274	3	5.00	10.0	48	40	8
274	4	120.00	8.0	960	816	144
274	11	1.53	700.0	1072	236	836
274	22	5.56	70.0	390	86	304
Sub Total				2470	1178	1292
275	4	501.00	8.0	4007	3406	601
275	5	13.00	7.0	92	78	14
275	11	1.92	700.0	1345	296	1049
275	30	3.77	60.0	227	23	204
275	34	0.51	90.0	46	9	37
275	40	6.85	40.0	274	41	233
Sub Total				5991	3853	2138
276	4	2.00	8.0	16	14	2
276	5	27.00	7.0	188	160	28
276	11	5.45	700.0	3815	839	2976
276	21	3.51	110.0	386	85	301
276	22	18.61	70.0	1303	287	1016
276	34	1.37	90.0	123	25	98
Sub Total				5831	1410	4421
277	4	19.00	8.0	154	130	24
277	5	34.00	7.0	238	203	35
277	11	1.35	700.0	946	208	738
277	12	2.07	500.0	1034	207	827
277	22	8.12	70.0	569	125	444
277	40	9.67	40.0	386	58	328
Sub Total				3327	931	2396

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
278	3	36.00	10.0	359	295	64
278	4	12.00	8.0	97	82	15
278	11	2.99	700.0	2093	460	1633
278	12	5.31	500.0	2654	531	2123
278	16	3.94	240.0	945	189	756
278	30	2.56	60.0	153	15	138
278	33	5.81	500.0	2905	581	2324
278	34	5.01	90.0	451	90	361
Sub Total				9657	2243	7414
279	3	9.00	10.0	90	74	16
279	4	163.00	8.0	1303	1108	195
279	5	72.00	7.0	503	428	75
279	11	1.71	700.0	1196	263	933
279	14	2.83	300.0	849	229	620
279	15	2.30	100.0	230	62	168
279	30	1.80	60.0	109	11	98
279	33	1.73	500.0	865	173	692
279	40	0.50	40.0	20	3	17
Sub Total				5165	2351	2814
280	11	3.67	700.0	2568	565	2003
280	14	5.81	300.0	1743	471	1272
280	33	3.56	500.0	1780	356	1424
280	43	20.30	1.0	20	4	16
Sub Total				6111	1396	4715
281	4	15.00	8.0	120	102	18
281	21	5.50	110.0	605	133	472
281	33	2.95	500.0	1475	295	1180
Sub Total				2200	530	1670
282	1	1.00	12.0	12	10	2
282	4	144.00	8.0	1154	980	174
282	16	2.72	240.0	653	131	522
282	43	35.53	1.0	35	7	28
Sub Total				1854	1128	726

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
283	1	3.00	12.0	37	30	7
283	3	29.00	10.0	290	238	52
283	4	228.00	8.0	1823	1550	273
283	5	622.00	7.0	4356	3702	654
283	15	3.15	100.0	314	85	229
283	41	137.66	8.0	1101	220	881
283	42	5.96	5.0	28	4	24
283	43	54.32	1.0	54	11	43
Sub Total				8003	5840	2163
284	1	5.00	12.0	59	49	10
284	43	80.86	1.0	80	16	64
Sub Total				139	65	74
285	1	3.00	12.0	37	30	7
285	43	148.82	1.0	149	30	119
Sub Total				186	60	126
286	1	2.00	12.0	24	20	4
286	42	19.92	5.0	100	15	85
Sub Total				124	35	89
287	1	9.00	12.0	109	89	20
287	43	68.43	1.0	69	14	55
Sub Total				178	103	75
288	43	139.36	1.0	140	28	112
Sub Total				140	28	112
289	1	17.00	12.0	203	167	36
289	43	115.95	1.0	115	23	92
Sub Total				318	190	128
290	4	329.00	8.0	2633	2238	395
290	5	96.00	7.0	673	572	101
290	16	2.42	240.0	580	116	464
290	34	2.12	90.0	191	38	153
Sub Total				4077	2964	1113

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
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291	3	49.00	10.0	490	402	88
291	4	145.00	8.0	1160	986	174
291	5	14.00	7.0	99	84	15
291	11	4.64	700.0	3249	715	2534
291	12	1.79	500.0	896	179	717
291	13	17.89	360.0	6440	1481	4959
291	15	7.09	100.0	708	191	517
291	34	1.37	90.0	123	25	98
Sub Total				13165	4063	9102
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292	3	72.00	10.0	719	590	129
292	4	212.00	8.0	1697	1442	255
292	5	111.00	7.0	777	660	117
292	6	111.00	6.0	666	566	100
292	11	6.12	700.0	4283	942	3341
292	12	13.64	500.0	6820	1364	5456
292	16	3.67	240.0	880	176	704
292	30	3.23	60.0	193	19	174
292	34	9.10	90.0	820	164	656
292	40	0.44	40.0	18	3	15
Sub Total				16873	5926	10947
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293	3	26.00	10.0	259	213	46
293	4	214.00	8.0	1713	1456	257
293	5	46.00	7.0	322	274	48
293	11	1.34	700.0	937	206	731
293	15	5.60	100.0	560	151	409
293	16	3.05	240.0	731	146	585
293	22	10.21	70.0	715	157	558
293	30	3.68	60.0	221	22	199
293	34	1.28	90.0	115	23	92
293	40	0.33	40.0	14	2	12
Sub Total				5587	2650	2937
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294	4	531.00	8.0	4246	3610	636
294	5	13.00	7.0	92	78	14
294	11	0.93	700.0	651	143	508
294	22	6.99	70.0	490	108	382
294	40	1.55	40.0	61	9	52
Sub Total				5540	3948	1592

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
295	11	5.21	700.0	3646	802	2844
295	15	1.34	100.0	133	36	97
295	22	21.21	70.0	1485	327	1158
Sub Total				5264	1165	4099
296	3	25.00	10.0	248	204	44
296	4	151.00	8.0	1207	1026	181
296	5	154.00	7.0	1079	917	162
296	11	0.82	700.0	573	126	447
296	15	3.08	100.0	308	83	225
296	22	1.62	70.0	113	25	88
Sub Total				3528	2381	1147
297	4	51.00	8.0	407	346	61
297	5	52.00	7.0	364	309	55
297	11	2.31	700.0	1618	356	1262
297	12	4.22	500.0	2110	422	1688
297	22	2.38	70.0	167	37	130
Sub Total				4666	1470	3196
298	4	220.00	8.0	1760	1496	264
298	5	4.00	7.0	27	23	4
298	30	0.34	60.0	20	2	18
298	34	6.82	90.0	614	123	491
298	40	3.51	40.0	140	21	119
Sub Total				2561	1665	896
299	4	360.00	8.0	2880	2448	432
299	5	171.00	7.0	1197	1017	180
299	6	144.00	6.0	864	734	130
299	11	2.40	700.0	1681	370	1311
299	16	2.38	240.0	571	114	457
299	30	3.69	60.0	221	22	199
299	34	0.92	90.0	83	17	66
299	43	6.74	1.0	6	1	5
Sub Total				7503	4723	2780
300	4	2.00	8.0	16	14	2
300	5	56.00	7.0	393	334	59
300	11	5.38	700.0	3767	829	2938
300	12	10.18	500.0	5090	1018	4072
300	30	42.77	60.0	2567	257	2310
Sub Total				11833	2452	9381

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
301	5	87.00	7.0	608	517	91
301	11	5.37	700.0	3760	827	2933
301	12	2.54	500.0	1270	254	1016
301	15	1.58	100.0	159	43	116
301	16	1.87	240.0	449	90	359
Sub Total				6246	1731	4515
302	4	70.00	8.0	560	476	84
302	5	268.00	7.0	1877	1595	282
302	11	0.14	700.0	99	22	77
302	12	0.42	500.0	210	42	168
302	16	4.90	240.0	1176	235	941
302	31	7.73	200.0	1546	232	1314
302	34	2.55	90.0	229	46	183
Sub Total				5697	2648	3049
303	3	26.00	10.0	259	213	46
303	5	199.00	7.0	1393	1184	209
303	7	216.00	4.0	865	562	303
303	15	0.46	100.0	46	12	34
303	40	6.61	40.0	265	40	225
303	42	3.29	5.0	16	2	14
Sub Total				2844	2013	831
304	1	17.00	12.0	203	167	36
304	3	18.00	10.0	181	148	33
304	7	2.00	4.0	8	5	3
304	43	85.93	1.0	86	17	69
Sub Total				478	337	141
305	1	9.00	12.0	109	89	20
305	14	1.10	300.0	330	89	241
305	43	141.44	1.0	141	28	113
Sub Total				580	206	374
306	1	3.00	12.0	37	30	7
306	5	127.00	7.0	888	755	133
306	43	123.80	1.0	125	25	100
Sub Total				1050	810	240

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
307	1	6.00	12.0	71	59	12
307	43	143.56	1.0	145	29	116
Sub Total				216	88	128
308	1	2.00	12.0	24	20	4
308	14	0.96	300.0	289	78	211
308	43	138.52	1.0	139	28	111
Sub Total				452	126	326
309	3	6.00	10.0	59	49	10
309	5	11.00	7.0	77	65	12
Sub Total				136	114	22
310	3	3.00	10.0	30	24	6
310	5	3.00	7.0	21	18	3
310	11	4.60	700.0	3219	708	2511
310	43	67.06	1.0	66	13	53
Sub Total				3336	763	2573
311	3	11.00	10.0	110	90	20
311	5	210.00	7.0	1469	1249	220
Sub Total				1579	1339	240
312	4	63.00	8.0	503	428	75
312	5	267.00	7.0	1868	1588	280
312	12	2.34	500.0	1170	234	936
Sub Total				3541	2250	1291
313	3	43.00	10.0	430	352	78
313	4	78.00	8.0	623	530	93
313	5	152.00	7.0	1064	904	160
313	11	2.31	700.0	1618	356	1262
313	12	4.81	500.0	2404	481	1923
Sub Total				6139	2623	3516
314	3	56.00	10.0	559	459	100
314	4	258.00	8.0	2064	1754	310
Sub Total				2623	2213	410

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
315	4	323.00	8.0	2584	2196	388
315	5	96.00	7.0	673	572	101
Sub Total				3257	2768	489
316	3	19.00	10.0	190	156	34
316	4	424.00	8.0	3393	2884	509
316	30	1.21	60.0	72	7	65
Sub Total				3655	3047	608
317	3	51.00	10.0	510	418	92
317	4	1.00	8.0	7	6	1
317	5	3.00	7.0	21	18	3
317	11	0.34	700.0	237	52	185
Sub Total				775	494	281
318	3	64.00	10.0	641	525	116
318	4	64.00	8.0	513	436	77
318	5	242.00	7.0	1695	1441	254
318	11	1.04	700.0	728	160	568
318	15	3.73	100.0	373	101	272
318	30	3.31	60.0	199	20	179
318	34	3.49	90.0	314	63	251
Sub Total				4463	2746	1717
319	3	11.00	10.0	110	90	20
319	5	3.00	7.0	21	18	3
319	11	1.28	700.0	896	197	699
319	12	3.17	500.0	1584	317	1267
319	15	1.49	100.0	149	40	109
319	43	91.95	1.0	91	18	73
Sub Total				2851	680	2171
320	7	282.00	4.0	1127	733	394
320	11	2.00	700.0	1400	308	1092
320	12	2.67	500.0	1334	267	1067
Sub Total				3861	1308	2553
321	1	3.00	12.0	37	30	7
321	7	6.00	4.0	25	16	9
321	43	79.51	1.0	80	16	64
Sub Total				142	62	80

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
322	3	15.00	10.0	148	122	26
322	12	9.10	500.0	4550	910	3640
322	34	4.51	90.0	406	81	325
322	43	76.44	1.0	75	15	60
Sub Total				5179	1128	4051
323	1	1.00	12.0	12	10	2
323	3	4.00	10.0	41	33	8
323	43	148.55	1.0	149	30	119
Sub Total				202	73	129
324	1	19.00	12.0	229	187	42
324	43	96.84	1.0	97	19	78
Sub Total				326	206	120
325	1	13.00	12.0	156	128	28
325	43	162.57	1.0	163	33	130
Sub Total				319	161	158
326	1	5.00	12.0	59	49	10
326	43	61.09	1.0	60	12	48
Sub Total				119	61	58
327	1	32.00	12.0	385	315	70
327	43	48.23	1.0	49	10	39
Sub Total				434	325	109
328	43	57.01	1.0	57	11	46
Sub Total				57	11	46
329	1	5.00	12.0	59	49	10
329	3	105.00	10.0	1048	860	188
329	4	27.00	8.0	216	184	32
329	7	1.00	4.0	5	3	2
329	40	0.20	40.0	7	1	6
329	41	211.05	8.0	1689	338	1351
Sub Total				3024	1435	1589

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
330	1	1.00	12.0	12	10	2
330	3	70.00	10.0	700	574	126
330	4	177.00	8.0	1416	1204	212
330	7	7.00	4.0	27	18	9
330	30	41.86	60.0	2511	251	2260
330	40	5.69	40.0	227	34	193
330	41	162.29	8.0	1299	260	1039
330	42	16.45	5.0	81	12	69
330	43	80.96	1.0	80	16	64
Sub Total				6353	2379	3974
331	7	231.00	4.0	925	601	324
Sub Total				925	601	324
332	4	2.00	8.0	16	14	2
332	7	882.00	4.0	3527	2293	1234
332	15	2.42	100.0	241	65	176
332	41	125.32	8.0	1003	201	802
Sub Total				4787	2573	2214
333	3	71.00	10.0	710	582	128
333	4	54.00	8.0	433	368	65
333	5	42.00	7.0	295	251	44
333	7	151.00	4.0	605	393	212
333	11	4.03	700.0	2822	621	2201
333	16	3.50	240.0	840	168	672
333	33	2.76	500.0	1380	276	1104
333	40	6.13	40.0	245	37	208
Sub Total				7330	2696	4634
334	3	1.00	10.0	10	8	2
334	4	3174.00	8.0	25393	21584	3809
334	11	1.41	700.0	986	217	769
334	40	7.65	40.0	306	46	260
Sub Total				26695	21855	4840
335	4	159.00	8.0	1273	1082	191
335	7	488.00	4.0	1953	1269	684
335	15	59.79	100.0	5978	1614	4364
335	41	176.02	8.0	1409	282	1127
Sub Total				10613	4247	6366

Indio General Plan Traffic Model
Existing Conditions (1992) Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
336	7	19.00	4.0	75	49	26
Sub Total				75	49	26
337	1	2.00	12.0	24	20	4
337	43	398.24	1.0	399	80	319
Sub Total				423	100	323
338	12	2.01	500.0	1004	201	803
Sub Total				1004	201	803
340	1	13.00	12.0	156	128	28
340	43	117.80	1.0	119	24	95
Sub Total				275	152	123
341	1	7.00	12.0	85	69	16
341	43	129.90	1.0	129	26	103
Sub Total				214	95	119
Network Totals				812538	366020	446518

APPENDIX B

EXISTING CONDITIONS PRODUCTIONS AND
ATTRACTIONS TRIP GENERATION BY ZONE

GP	1	1	230	1510	440	0	0
GP	2	1	2400	16080	4700	0	0
GP	3	1	1430	9530	2790	0	0
GP	4	1	640	4280	1250	0	0
GP	5	1	0	0	0	0	0
GP	6	1	580	3900	1140	0	0
GP	7	1	2410	16130	4710	0	0
GP	8	1	820	5480	1600	0	0
GP	9	1	120	820	240	0	0
GP	10	1	0	0	0	0	0
GP	11	1	70	440	130	0	0
GP	12	1	110	760	220	0	0
GP	13	1	50	320	90	0	0
GP	14	1	230	1510	440	0	0
GP	15	1	0	0	0	0	0
GP	16	1	680	4520	1320	0	0
GP	17	1	740	4930	1440	0	0
GP	18	1	150	1030	300	0	0
GP	19	1	320	2170	630	0	0
GP	20	1	250	1680	490	0	0
GP	21	1	0	0	0	0	0
GP	22	1	70	450	130	0	0
GP	23	1	290	1950	570	0	0
GP	24	1	0	0	0	0	0
GA	1	1	30	140	440	0	0
GA	2	1	270	1540	4700	0	0
GA	3	1	160	910	2790	0	0
GA	4	1	70	410	1250	0	0
GA	5	1	0	0	0	0	0
GA	6	1	70	370	1140	0	0
GA	7	1	270	1550	4710	0	0
GA	8	1	90	530	1600	0	0
GA	9	1	10	80	240	0	0
GA	10	1	0	0	0	0	0
GA	11	1	10	40	130	0	0
GA	12	1	10	70	220	0	0
GA	13	1	10	30	90	0	0
GA	14	1	30	140	440	0	0
GA	15	1	0	0	0	0	0
GA	16	1	80	430	1320	0	0
GA	17	1	80	470	1440	0	0
GA	18	1	20	100	300	0	0
GA	19	1	40	210	630	0	0
GA	20	1	30	160	490	0	0
GA	21	1	0	0	0	0	0
GA	22	1	10	40	130	0	0
GA	23	1	30	190	570	0	0
GA	24	1	0	0	0	0	0
GP	30	1	1530	3486	1010	0	0
GP	31	1	0	0	4464	0	0
GP	32	1	1809	3953	2899	0	0
GP	33	1	314	706	5133	0	0
GP	34	1	661	1432	3356	0	0
GP	35	1	381	819	1013	0	0
GP	37	1	1517	3798	1806	0	0
GP	38	1	137	499	161	0	0
GP	39	1	354	1131	291	0	0
GP	40	1	112	239	42	0	0
GP	41	1	319	701	1083	0	0
GP	42	1	472	1209	319	0	0

GP	43	1	1121	2382	327	0	0
GP	44	1	606	1309	254	0	0
GP	45	1	15	34	5	0	0
GP	46	1	443	1601	572	0	0
GP	49	1	3	6	1	0	0
GP	50	1	0	0	4317	0	0
GP	54	1	94	342	241	0	0
GP	55	1	274	991	307	0	0
GP	57	1	1	3	2436	0	0
GP	58	1	1057	2397	449	0	0
GP	59	1	65	153	65	0	0
GP	60	1	0	0	1034	0	0
GP	61	1	969	2144	2841	0	0
GP	63	1	1330	2887	758	0	0
GP	64	1	129	276	49	0	0
GP	65	1	114	415	372	0	0
GP	66	1	1699	3695	1283	0	0
GP	67	1	4094	8887	4100	0	0
GP	68	1	216	464	1058	0	0
GP	69	1	74	248	472	0	0
GP	70	1	334	799	866	0	0
GP	71	1	334	966	350	0	0
GP	72	1	0	0	42	0	0
GP	73	1	1135	2441	736	0	0
GP	74	1	160	579	160	0	0
GP	75	1	247	896	305	0	0
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GP	77	1	81	295	101	0	0
GP	80	1	374	1351	374	0	0
GP	81	1	571	2063	619	0	0
GP	83	1	894	1952	1478	0	0
GP	84	1	441	948	165	0	0
GP	85	1	95	205	433	0	0
GP	86	1	204	738	204	0	0
GP	87	1	730	1983	2041	0	0
GP	88	1	485	1042	207	0	0
GP	89	1	169	362	101	0	0
GP	90	1	588	1266	221	0	0
GP	91	1	60	129	22	0	0
GP	92	1	604	1996	523	0	0
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GP	94	1	33	69	12	0	0
GP	95	1	166	469	110	0	0
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GP	98	1	0	0	14	0	0
GP	100	1	3	6	1	0	0
GP	102	1	31	113	31	0	0
GP	103	1	49	106	27	0	0
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GP	108	1	0	0	733	0	0
GP	109	1	171	370	206	0	0
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GP	113	1	187	638	287	0	0
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GP	117	1	2	5	1123	0	0
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GP	119	1	0	0	36	0	0

GP	120	1	0	0	11	0	0
GP	121	1	15	33	3	0	0
GP	122	1	89	190	26	0	0
GP	123	1	2	5	61	0	0
GP	124	1	169	359	64	0	0
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GP	128	1	12	24	3	0	0
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GP	130	1	282	600	420	0	0
GP	131	1	3	6	1	0	0
GP	132	1	49	104	438	0	0
GP	133	1	13	28	4	0	0
GP	136	1	0	0	13	0	0
GP	140	1	0	0	62	0	0
GP	144	1	0	0	867	0	0
GP	146	1	3	6	49	0	0
GP	148	1	11	24	4	0	0
GP	150	1	38	81	14	0	0
GP	151	1	52	188	52	0	0
GP	153	1	16	56	16	0	0
GP	155	1	646	2334	646	0	0
GP	156	1	0	0	145	0	0
GP	157	1	3049	7012	3435	0	0
GP	160	1	0	0	215	0	0
GP	161	1	3	6	1	0	0
GP	163	1	32	67	9	0	0
GP	165	1	9	18	20	0	0
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GP	168	1	32	67	38	0	0
GP	169	1	6	12	33	0	0
GP	170	1	6	12	26	0	0
GP	171	1	0	0	23	0	0
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GP	173	1	12	24	34	0	0
GP	174	1	12	24	35	0	0
GP	175	1	0	0	35	0	0
GP	176	1	0	0	15	0	0
GP	177	1	0	0	63	0	0
GP	178	1	0	0	19	0	0
GP	179	1	3	6	30	0	0
GP	180	1	3	6	33	0	0
GP	181	1	0	0	20	0	0
GP	182	1	0	0	18	0	0
GP	183	1	0	0	33	0	0
GP	184	1	0	0	27	0	0
GP	185	1	0	0	7	0	0
GP	189	1	0	0	26	0	0
GP	190	1	22	50	30	0	0
GP	191	1	28	62	36	0	0
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GP	194	1	6	12	2	0	0
GP	198	1	0	0	24	0	0
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GP	201	1	89	209	684	0	0
GP	202	1	217	505	233	0	0
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GP	209	1	0	0	16	0	0

GP	210	1	0	0	25	0	0
GP	211	1	6	14	920	0	0
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GP	213	1	0	0	101	0	0
GP	214	1	17	37	14	0	0
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GP	221	1	0	0	16	0	0
GP	222	1	0	0	290	0	0
GP	223	1	0	0	235	0	0
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GP	226	1	0	0	435	0	0
GP	227	1	27	58	706	0	0
GP	228	1	2	5	79	0	0
GP	230	1	23	49	7	0	0
GP	231	1	0	0	188	0	0
GP	232	1	0	0	11	0	0
GP	233	1	578	1270	161	0	0
GP	234	1	13	27	741	0	0
GP	235	1	26	57	161	0	0
GP	236	1	23	49	740	0	0
GP	237	1	12	25	774	0	0
GP	238	1	0	0	277	0	0
GP	239	1	6	12	11	0	0
GP	240	1	3	6	875	0	0
GP	241	1	392	862	1365	0	0
GP	242	1	720	1583	915	0	0
GP	243	1	662	1448	2284	0	0
GP	244	1	552	1212	949	0	0
GP	245	1	845	1858	604	0	0
GP	246	1	764	1681	530	0	0
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GP	248	1	3	6	32	0	0
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GP	250	1	29	63	38	0	0
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GP	252	1	36	79	431	0	0
GP	253	1	286	629	457	0	0
GP	254	1	83	181	1255	0	0
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GP	256	1	21	43	235	0	0
GP	257	1	22	46	31	0	0
GP	258	1	14	28	36	0	0
GP	259	1	47	100	40	0	0
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GP	261	1	9	18	30	0	0
GP	262	1	55	116	231	0	0
GP	263	1	75	159	82	0	0
GP	264	1	66	142	43	0	0
GP	265	1	14	31	34	0	0
GP	266	1	226	497	45	0	0
GP	267	1	495	1090	2008	0	0
GP	268	1	98	211	1150	0	0
GP	269	1	6	12	293	0	0
GP	270	1	0	0	116	0	0
GP	271	1	0	0	1539	0	0
GP	272	1	38	84	550	0	0
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GP	276	1	51	113	1246	0	0
GP	277	1	98	215	618	0	0
GP	278	1	110	237	1896	0	0
GP	279	1	474	1040	837	0	0
GP	280	1	0	0	1396	0	0
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GP	282	1	291	640	197	0	0
GP	283	1	1624	3564	652	0	0
GP	284	1	14	31	20	0	0
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GP	286	1	6	12	17	0	0
GP	287	1	26	55	22	0	0
GP	288	1	0	0	28	0	0
GP	289	1	49	104	37	0	0
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GP	291	1	433	942	2688	0	0
GP	292	1	958	2093	2875	0	0
GP	293	1	571	1252	827	0	0
GP	294	1	1085	2386	477	0	0
GP	295	1	0	0	1165	0	0
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GP	299	1	1235	2717	771	0	0
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GP	301	1	152	335	1244	0	0
GP	302	1	609	1340	699	0	0
GP	303	1	540	1201	272	0	0
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GP	305	1	26	55	125	0	0
GP	306	1	231	507	72	0	0
GP	307	1	17	37	34	0	0
GP	308	1	6	12	108	0	0
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GP	310	1	12	27	724	0	0
GP	311	1	394	864	81	0	0
GP	312	1	593	1305	352	0	0
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GP	315	1	814	1791	163	0	0
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GP	317	1	129	276	89	0	0
GP	318	1	706	1540	500	0	0
GP	319	1	31	68	581	0	0
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GP	321	1	13	26	23	0	0
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GP	323	1	13	26	34	0	0
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GP	325	1	37	80	44	0	0
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GP	328	1	0	0	11	0	0
GP	329	1	321	686	428	0	0
GP	330	1	529	1152	698	0	0
GP	331	1	139	323	139	0	0
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GP	335	1	611	1383	2253	0	0

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GP	337	1	6	12	82	0	0
GP	338	1	0	0	201	0	0
GP	340	1	37	80	35	0	0
GP	341	1	20	43	32	0	0
GA	30	1	254	1373	1010	0	0
GA	31	1	4865	8529	4464	0	0
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GA	35	1	683	2140	1013	0	0
GA	37	1	587	3799	1806	0	0
GA	38	1	24	277	161	0	0
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GA	40	1	9	53	42	0	0
GA	41	1	479	2492	1083	0	0
GA	42	1	37	441	319	0	0
GA	43	1	93	420	327	0	0
GA	44	1	48	324	254	0	0
GA	45	1	1	7	5	0	0
GA	46	1	101	1019	572	0	0
GA	49	1	0	1	1	0	0
GA	50	1	2159	10793	4317	0	0
GA	54	1	81	514	241	0	0
GA	55	1	97	455	307	0	0
GA	57	1	952	3698	2436	0	0
GA	58	1	87	599	449	0	0
GA	59	1	4	83	65	0	0
GA	60	1	2022	611	1034	0	0
GA	61	1	5091	1877	2841	0	0
GA	63	1	313	1995	758	0	0
GA	64	1	10	62	49	0	0
GA	65	1	139	824	372	0	0
GA	66	1	1316	1679	1283	0	0
GA	67	1	2806	7399	4100	0	0
GA	68	1	442	1972	1058	0	0
GA	69	1	630	564	472	0	0
GA	70	1	380	1987	866	0	0
GA	71	1	86	641	350	0	0
GA	72	1	11	95	42	0	0
GA	73	1	247	1319	736	0	0
GA	74	1	14	251	160	0	0
GA	75	1	50	533	305	0	0
GA	76	1	8	157	100	0	0
GA	77	1	17	178	101	0	0
GA	80	1	31	586	374	0	0
GA	81	1	155	933	619	0	0
GA	83	1	375	3084	1478	0	0
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GA	85	1	116	949	433	0	0
GA	86	1	17	321	204	0	0
GA	87	1	855	4635	2041	0	0
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GA	89	1	42	166	101	0	0
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GA	91	1	5	29	22	0	0
GA	92	1	50	808	523	0	0
GA	93	1	14	86	68	0	0
GA	94	1	2	16	12	0	0
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GA	100	1	0	1	1	0	0
GA	102	1	2	49	31	0	0
GA	103	1	8	44	27	0	0
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GA	107	1	0	2	2	0	0
GA	108	1	1434	434	733	0	0
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GA	112	1	45	230	176	0	0
GA	113	1	74	557	287	0	0
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GA	115	1	6	35	27	0	0
GA	116	1	230	1266	799	0	0
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GA	131	1	0	1	1	0	0
GA	132	1	216	1078	438	0	0
GA	133	1	1	6	4	0	0
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GA	140	1	140	47	62	0	0
GA	144	1	1105	1583	867	0	0
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GA	148	1	1	6	4	0	0
GA	150	1	3	18	14	0	0
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GA	155	1	53	1014	646	0	0
GA	156	1	39	329	145	0	0
GA	157	1	2602	5978	3435	0	0
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GA	163	1	3	12	9	0	0
GA	165	1	38	15	20	0	0
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GA	172	1	43	16	21	0	0
GA	173	1	71	27	34	0	0
GA	174	1	74	28	35	0	0
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GA	177	1	142	47	63	0	0
GA	178	1	42	14	19	0	0
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GA	184	1	62	21	27	0	0
GA	185	1	16	5	7	0	0
GA	189	1	59	20	26	0	0
GA	190	1	29	32	30	0	0
GA	191	1	69	33	36	0	0
GA	192	1	1	5	4	0	0
GA	194	1	0	2	2	0	0
GA	198	1	54	18	24	0	0
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GA	200	1	0	1	0	0	0
GA	201	1	220	1377	684	0	0
GA	202	1	50	286	233	0	0
GA	203	1	0	1	1	0	0
GA	209	1	37	12	16	0	0
GA	210	1	57	19	25	0	0
GA	211	1	264	1944	920	0	0
GA	212	1	282	2052	918	0	0
GA	213	1	59	205	101	0	0
GA	214	1	21	13	14	0	0
GA	215	1	41	16	20	0	0
GA	221	1	36	12	16	0	0
GA	222	1	133	616	290	0	0
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GA	225	1	35	13	17	0	0
GA	226	1	793	511	435	0	0
GA	227	1	404	1703	706	0	0
GA	228	1	166	48	79	0	0
GA	230	1	2	9	7	0	0
GA	231	1	390	100	188	0	0
GA	232	1	24	8	11	0	0
GA	233	1	87	308	161	0	0
GA	234	1	1029	862	741	0	0
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GA	236	1	990	969	740	0	0
GA	237	1	614	1358	774	0	0
GA	238	1	570	141	277	0	0
GA	239	1	19	7	11	0	0
GA	240	1	1740	493	875	0	0
GA	241	1	864	3186	1365	0	0
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GA	244	1	271	2429	949	0	0
GA	245	1	259	1428	604	0	0
GA	246	1	210	1223	530	0	0
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GA	250	1	71	33	38	0	0
GA	251	1	67	178	112	0	0
GA	252	1	182	887	431	0	0
GA	253	1	169	871	457	0	0
GA	254	1	739	2537	1255	0	0
GA	255	1	225	533	289	0	0
GA	256	1	110	491	235	0	0
GA	257	1	58	27	31	0	0
GA	258	1	72	29	36	0	0

GA	259	1	62	36	40	0	0
GA	260	1	53	28	31	0	0
GA	261	1	62	23	30	0	0
GA	262	1	94	487	231	0	0
GA	263	1	70	144	82	0	0
GA	264	1	62	43	43	0	0
GA	265	1	68	27	34	0	0
GA	266	1	9	81	45	0	0
GA	267	1	847	4861	2008	0	0
GA	268	1	828	2347	1150	0	0
GA	269	1	542	179	293	0	0
GA	270	1	242	63	116	0	0
GA	271	1	1849	2071	1539	0	0
GA	272	1	645	749	550	0	0
GA	273	1	1295	2499	1151	0	0
GA	274	1	250	669	373	0	0
GA	275	1	166	1398	574	0	0
GA	276	1	1009	2166	1246	0	0
GA	277	1	439	1339	618	0	0
GA	278	1	1249	4269	1896	0	0
GA	279	1	342	1635	837	0	0
GA	280	1	604	2715	1396	0	0
GA	281	1	494	742	434	0	0
GA	282	1	256	273	197	0	0
GA	283	1	235	1276	652	0	0
GA	284	1	37	17	20	0	0
GA	285	1	68	25	33	0	0
GA	286	1	5	67	17	0	0
GA	287	1	33	20	22	0	0
GA	288	1	63	21	28	0	0
GA	289	1	56	35	37	0	0
GA	290	1	265	528	320	0	0
GA	291	1	1041	5373	2688	0	0
GA	292	1	1436	6636	2875	0	0
GA	293	1	755	1355	827	0	0
GA	294	1	305	810	477	0	0
GA	295	1	900	2034	1165	0	0
GA	296	1	144	638	365	0	0
GA	297	1	391	1952	853	0	0
GA	298	1	119	542	235	0	0
GA	299	1	388	1621	771	0	0
GA	300	1	996	6260	2125	0	0
GA	301	1	532	2739	1244	0	0
GA	302	1	730	1620	699	0	0
GA	303	1	47	512	272	0	0
GA	304	1	47	49	45	0	0
GA	305	1	99	150	125	0	0
GA	306	1	66	102	72	0	0
GA	307	1	66	28	34	0	0
GA	308	1	91	127	108	0	0
GA	309	1	2	12	8	0	0
GA	310	1	224	1625	724	0	0
GA	311	1	17	142	81	0	0
GA	312	1	141	798	352	0	0
GA	313	1	363	2202	951	0	0
GA	314	1	32	236	142	0	0
GA	315	1	33	293	163	0	0
GA	316	1	45	373	190	0	0
GA	317	1	24	168	89	0	0
GA	318	1	183	1034	500	0	0

GA	319	1	270	1320	581	0	0
GA	320	1	228	1581	744	0	0
GA	321	1	37	20	23	0	0
GA	322	1	553	2482	1016	0	0
GA	323	1	68	27	34	0	0
GA	324	1	49	36	35	0	0
GA	325	1	76	38	44	0	0
GA	326	1	28	14	16	0	0
GA	327	1	30	42	37	0	0
GA	328	1	26	9	11	0	0
GA	329	1	193	968	428	0	0
GA	330	1	460	2816	698	0	0
GA	331	1	9	176	139	0	0
GA	332	1	159	1259	796	0	0
GA	333	1	709	2645	1280	0	0
GA	334	1	328	2978	1534	0	0
GA	335	1	772	3341	2253	0	0
GA	336	1	1	14	11	0	0
GA	337	1	179	62	82	0	0
GA	338	1	100	502	201	0	0
GA	340	1	56	32	35	0	0
GA	341	1	60	27	32	0	0

APPENDIX C

GENERAL PLAN PREFERRED LAND USE TRIP GENERATION BY ZONE

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
30	15	14.00	100.0	1400	378	1022
30	3	417.00	10.0	4170	3420	750
30	4	118.00	8.0	943	802	141
30	7	392.00	4.0	1568	1019	549
30	8	194.00	3.0	582	407	175
Sub Total				8663	6026	2637
31	12	35.20	500.0	17600	3520	14080
31	16	65.50	240.0	15720	3144	12576
Sub Total				33320	6664	26656
32	13	32.05	360.0	11539	2654	8885
32	3	432.00	10.0	4319	3542	777
32	4	205.00	8.0	1640	1394	246
32	6	229.00	6.0	1376	1169	207
32	7	467.00	4.0	1868	1214	654
Sub Total				20742	9973	10769
33	13	63.07	360.0	22705	5222	17483
33	16	1.14	240.0	274	55	219
33	3	27.00	10.0	270	222	48
33	33	0.29	500.0	145	29	116
33	4	220.00	8.0	1760	1496	264
33	7	180.00	4.0	720	468	252
Sub Total				25874	7492	18382
34	11	2.47	700.0	1729	380	1349
34	12	23.40	500.0	11700	2340	9360
34	14	0.49	300.0	148	40	108
34	16	15.58	240.0	3740	748	2992
34	23	0.87	10.0	8	2	6
34	3	795.00	10.0	7948	6518	1430
34	7	77.00	4.0	308	200	108
Sub Total				25581	10228	15353

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
35	16	20.45	240.0	4909	982	3927
35	2	79.00	10.0	790	648	142
35	3	236.00	10.0	2359	1935	424
35	33	20.45	500.0	10225	2045	8180
35	4	234.00	8.0	1873	1592	281
35	5	276.00	7.0	1933	1643	290
35	7	444.00	4.0	1775	1154	621
35	8	770.00	3.0	2310	1617	693
Sub Total				26174	11616	14558
36	8	221.00	3.0	663	464	199
Sub Total				663	464	199
37	11	1.37	700.0	960	211	749
37	12	8.94	500.0	4470	894	3576
37	2	33.00	10.0	330	270	60
37	4	234.00	8.0	1873	1592	281
37	5	276.00	7.0	1933	1643	290
37	7	561.00	4.0	2244	1459	785
37	8	501.00	3.0	1503	1052	451
Sub Total				13313	7121	6192
38	41	15.30	8.0	121	24	97
38	7	119.00	4.0	475	309	166
38	8	221.00	3.0	663	464	199
Sub Total				1259	797	462
39	1	1.00	12.0	12	10	2
39	3	36.00	10.0	359	295	64
39	7	238.00	4.0	953	619	334
39	8	405.00	3.0	1217	852	365
Sub Total				2541	1776	765
40	1	1.00	12.0	12	10	2
40	13	1.80	360.0	648	149	499
40	2	40.00	10.0	400	328	72
40	23	13.00	10.0	132	33	99
40	3	192.00	10.0	1919	1574	345
40	7	124.00	4.0	495	322	173
Sub Total				3606	2416	1190

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
41	12	9.07	500.0	4536	907	3629
41	3	159.00	10.0	1590	1304	286
41	33	2.41	500.0	1205	241	964
41	4	698.00	8.0	5584	4746	838
41	7	150.00	4.0	600	390	210
Sub Total				13515	7588	5927
42	3	138.00	10.0	1381	1132	249
42	4	137.00	8.0	1097	932	165
42	7	178.00	4.0	712	463	249
42	8	296.00	3.0	889	622	267
Sub Total				4079	3149	930
43	3	894.00	10.0	8941	7331	1610
43	7	482.00	4.0	1927	1253	674
Sub Total				10868	8584	2284
44	3	318.00	10.0	3181	2608	573
44	7	70.00	4.0	280	182	98
Sub Total				3461	2790	671
45	1	7.00	12.0	85	69	16
45	41	80.80	8.0	646	129	517
45	7	70.00	4.0	280	182	98
Sub Total				1011	380	631
46	8	2119.00	3.0	6359	4451	1908
Sub Total				6359	4451	1908
47	15	11.20	100.0	1119	302	817
47	3	1496.00	10.0	14959	12267	2692
47	40	10.30	40.0	413	62	351
47	7	806.00	4.0	3225	2096	1129
Sub Total				19716	14727	4989
48	2	164.00	10.0	1641	1345	296
48	7	88.00	4.0	353	229	124
Sub Total				1994	1574	420

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
-----	-----	-----	-----	-----	-----	-----
49	1	1.00	12.0	12	10	2
49	3	1084.00	10.0	10841	8889	1952
49	7	584.00	4.0	2335	1518	817
				-----	-----	-----
		Sub Total		13188	10417	2771
50	12	11.64	500.0	5820	1164	4656
50	2	35.00	10.0	348	286	62
50	20	61.50	180.0	11069	2435	8634
50	7	19.00	4.0	75	49	26
				-----	-----	-----
		Sub Total		17312	3934	13378
51	16	77.80	240.0	18671	3734	14937
51	20	77.80	180.0	14005	3081	10924
51	3	101.00	10.0	1010	828	182
51	7	54.00	4.0	215	140	75
				-----	-----	-----
		Sub Total		33901	7783	26118
52	2	1786.00	10.0	17859	14645	3214
52	7	962.00	4.0	3847	2501	1346
				-----	-----	-----
		Sub Total		21706	17146	4560
53	16	77.80	240.0	18671	3734	14937
				-----	-----	-----
		Sub Total		18671	3734	14937
54	23	155.60	10.0	1556	389	1167
54	41	91.60	8.0	733	147	586
54	7	87.00	4.0	347	226	121
54	8	162.00	3.0	487	341	146
				-----	-----	-----
		Sub Total		3123	1103	2020
55	2	181.00	10.0	1810	1484	326
55	43	166.50	2.0	334	67	267
55	7	97.00	4.0	388	252	136
55	8	676.00	3.0	2028	1420	608
				-----	-----	-----
		Sub Total		4560	3223	1337

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
<hr/>						
56	12	6.42	500.0	3210	642	2568
56	16	4.82	240.0	1156	231	925
56	2	75.00	10.0	748	614	134
56	3	55.00	10.0	548	450	98
56	7	70.00	4.0	280	182	98
56	8	1160.00	3.0	3480	2436	1044
<hr/>						
Sub Total				9422	4555	4867
<hr/>						
57	14	75.90	300.0	22770	6148	16622
57	41	241.12	8.0	1929	386	1543
57	8	33.00	3.0	100	70	30
<hr/>						
Sub Total				24799	6604	18195
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58	3	358.00	10.0	3581	2936	645
58	7	264.00	4.0	1056	686	370
58	8	134.00	3.0	401	281	120
<hr/>						
Sub Total				5038	3903	1135
<hr/>						
59	2	496.00	10.0	4959	4067	892
59	3	131.00	10.0	1310	1074	236
59	7	109.00	4.0	435	283	152
<hr/>						
Sub Total				6704	5424	1280
<hr/>						
60	20	83.47	180.0	15024	3305	11719
60	23	32.50	10.0	325	81	244
60	3	13.00	10.0	130	106	24
60	7	7.00	4.0	27	18	9
<hr/>						
Sub Total				15506	3510	11996
<hr/>						
61	2	22.00	10.0	219	180	39
61	20	38.60	180.0	6949	1529	5420
61	21	42.48	110.0	4673	1028	3645
61	4	696.00	8.0	5567	4732	835
61	7	386.00	4.0	1544	1004	540
<hr/>						
Sub Total				18952	8473	10479
<hr/>						
62	2	34.00	10.0	341	279	62
62	3	303.00	10.0	3030	2484	546
62	7	181.00	4.0	725	471	254
<hr/>						
Sub Total				4096	3234	862

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
-----	-----	-----	-----	-----	-----	-----
63	2	19.00	10.0	190	156	34
63	3	314.00	10.0	3141	2575	566
63	30	20.50	60.0	1230	123	1107
63	34	5.72	90.0	515	103	412
63	4	287.00	8.0	2297	1952	345
63	40	10.00	40.0	400	60	340
63	7	333.00	4.0	1332	866	466
				-----	-----	-----
		Sub Total		9105	5835	3270
64	3	205.00	10.0	2048	1680	368
64	7	111.00	4.0	444	289	155
				-----	-----	-----
		Sub Total		2492	1969	523
65	41	161.00	8.0	1289	258	1031
65	8	324.00	3.0	972	680	292
				-----	-----	-----
		Sub Total		2261	938	1323
66	16	39.01	240.0	9362	1872	7490
66	2	25.00	10.0	248	204	44
66	3	551.00	10.0	5510	4518	992
66	4	354.00	8.0	2833	2408	425
66	7	499.00	4.0	1995	1297	698
				-----	-----	-----
		Sub Total		19948	10299	9649
67	12	16.06	500.0	8030	1606	6424
67	16	19.67	240.0	4720	944	3776
67	3	1039.00	10.0	10390	8520	1870
67	34	4.61	90.0	415	83	332
67	4	544.00	8.0	4354	3700	654
67	40	1.60	40.0	65	10	55
67	7	853.00	4.0	3412	2218	1194
				-----	-----	-----
		Sub Total		31386	17081	14305
68	1	31.00	12.0	371	305	66
68	13	11.79	360.0	4244	976	3268
68	3	116.00	10.0	1159	951	208
68	7	80.00	4.0	320	208	112
				-----	-----	-----
		Sub Total		6094	2440	3654

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
69	20	7.31	180.0	1315	289	1026
69	3	14.00	10.0	141	115	26
69	41	72.20	8.0	579	116	463
69	7	7.00	4.0	27	18	9
69	8	315.00	3.0	947	663	284
Sub Total				3009	1201	1808
70	2	25.00	10.0	248	204	44
70	3	144.00	10.0	1441	1181	260
70	41	441.38	8.0	3531	706	2825
70	7	90.00	4.0	360	234	126
70	8	328.00	3.0	983	688	295
Sub Total				6563	3013	3550
71	3	111.00	10.0	1110	910	200
71	41	73.80	8.0	590	118	472
71	7	59.00	4.0	235	153	82
71	8	861.00	3.0	2583	1808	775
Sub Total				4518	2989	1529
72	1	59.00	12.0	709	581	128
72	11	0.27	700.0	190	42	148
72	16	7.23	240.0	1735	347	1388
72	3	382.00	10.0	3819	3132	687
72	7	238.00	4.0	953	619	334
Sub Total				7406	4721	2685
73	3	417.00	10.0	4170	3420	750
73	41	193.47	8.0	1549	310	1239
73	7	224.00	4.0	895	582	313
Sub Total				6614	4312	2302
74	8	623.00	3.0	1870	1309	561
Sub Total				1870	1309	561
75	41	36.06	8.0	289	58	231
75	8	782.00	3.0	2347	1643	704
Sub Total				2636	1701	935
76	8	305.00	3.0	917	642	275
Sub Total				917	642	275

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
77	41	12.60	8.0	100	20	80
77	7	70.00	4.0	280	182	98
77	8	131.00	3.0	393	275	118
Sub Total				773	477	296
78	8	581.00	3.0	1742	1220	522
Sub Total				1742	1220	522
79	8	1902.00	3.0	5707	3995	1712
Sub Total				5707	3995	1712
80	7	323.00	4.0	1292	840	452
80	8	599.00	3.0	1798	1259	539
Sub Total				3090	2099	991
81	43	240.60	2.0	481	96	385
81	7	493.00	4.0	1973	1282	691
81	8	915.00	3.0	2747	1923	824
Sub Total				5201	3301	1900
82	16	20.29	240.0	4869	974	3895
82	21	38.56	110.0	4242	933	3309
82	3	270.00	10.0	2700	2214	486
82	7	146.00	4.0	585	380	205
Sub Total				12396	4501	7895
83	11	7.56	700.0	5292	1164	4128
83	3	277.00	10.0	2770	2272	498
83	5	208.00	7.0	1457	1238	219
83	7	261.00	4.0	1044	679	365
Sub Total				10563	5353	5210
84	3	230.00	10.0	2300	1886	414
84	7	124.00	4.0	495	322	173
Sub Total				2795	2208	587

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
-----	-----	-----	-----	-----	-----	-----
85	11	2.58	700.0	1805	397	1408
85	2	38.00	10.0	381	312	69
85	3	99.00	10.0	990	812	178
85	7	74.00	4.0	295	192	103
				-----	-----	-----
		Sub Total		3471	1713	1758
86	7	176.00	4.0	705	458	247
86	8	328.00	3.0	983	688	295
				-----	-----	-----
		Sub Total		1688	1146	542
87	12	15.90	500.0	7950	1590	6360
87	3	252.00	10.0	2519	2066	453
87	33	0.17	500.0	85	17	68
87	7	136.00	4.0	544	354	190
87	8	698.00	3.0	2093	1465	628
				-----	-----	-----
		Sub Total		13191	5492	7699
88	3	232.00	10.0	2319	1902	417
88	43	34.00	2.0	69	14	55
88	7	125.00	4.0	500	325	175
				-----	-----	-----
		Sub Total		2888	2241	647
89	2	42.00	10.0	419	344	75
89	3	165.00	10.0	1648	1352	296
89	34	2.10	90.0	189	38	151
89	7	111.00	4.0	444	289	155
				-----	-----	-----
		Sub Total		2700	2023	677
90	3	216.00	10.0	2159	1771	388
90	7	117.00	4.0	468	304	164
				-----	-----	-----
		Sub Total		2627	2075	552
91	2	3.00	10.0	30	24	6
91	3	36.00	10.0	359	295	64
91	4	2477.00	8.0	19816	16844	2972
91	7	1356.00	4.0	5425	3526	1899
				-----	-----	-----
		Sub Total		25630	20689	4941

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
92	2	98.00	10.0	981	804	177
92	3	446.00	10.0	4459	3657	802
92	7	293.00	4.0	1173	762	411
92	8	1170.00	3.0	3510	2457	1053
Sub Total				10123	7680	2443
93	2	142.00	10.0	1419	1164	255
93	3	541.00	10.0	5410	4436	974
93	7	368.00	4.0	1473	957	516
Sub Total				8302	6557	1745
94	2	12.00	10.0	119	98	21
94	3	569.00	10.0	5690	4666	1024
94	7	312.00	4.0	1247	811	436
Sub Total				7056	5575	1481
95	1	52.00	12.0	624	512	112
95	3	33.00	10.0	330	270	60
95	7	45.00	4.0	180	117	63
95	8	33.00	3.0	100	70	30
Sub Total				1234	969	265
96	3	123.00	10.0	1230	1008	222
96	7	66.00	4.0	265	172	93
Sub Total				1495	1180	315
97	3	144.00	10.0	1441	1181	260
97	7	77.00	4.0	308	200	108
Sub Total				1749	1381	368
98	43	71.97	2.0	145	29	116
Sub Total				145	29	116
100	1	1.00	12.0	12	10	2
100	2	137.00	10.0	1370	1124	246
100	4	858.00	8.0	6864	5834	1030
100	7	535.00	4.0	2140	1391	749
Sub Total				10386	8359	2027

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
101	13	39.74	360.0	14306	3290	11016
101	16	39.74	240.0	9538	1908	7630
Sub Total				23844	5198	18646
102	8	202.00	3.0	607	425	182
Sub Total				607	425	182
103	2	6.00	10.0	59	49	10
103	3	18.00	10.0	181	148	33
103	7	13.00	4.0	53	34	19
Sub Total				293	231	62
104	1	488.00	12.0	5856	4802	1054
104	7	262.00	4.0	1047	681	366
Sub Total				6903	5483	1420
105	1	504.00	12.0	6047	4959	1088
105	7	271.00	4.0	1085	705	380
Sub Total				7132	5664	1468
106	2	382.00	10.0	3819	3132	687
106	3	174.00	10.0	1741	1427	314
106	7	300.00	4.0	1200	780	420
Sub Total				6760	5339	1421
107	1	791.00	12.0	9491	7783	1708
107	7	426.00	4.0	1705	1108	597
Sub Total				11196	8891	2305
108	1	46.00	12.0	553	453	100
108	20	18.41	180.0	3314	729	2585
108	43	19.39	2.0	39	8	31
108	7	24.00	4.0	95	62	33
Sub Total				4001	1252	2749
109	11	0.92	700.0	645	142	503
109	2	16.00	10.0	159	131	28
109	3	435.00	10.0	4348	3566	782
109	7	243.00	4.0	973	632	341
Sub Total				6125	4471	1654

Indio General Plan Traffic Model
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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
110	2	130.00	10.0	1300	1066	234
110	7	70.00	4.0	280	182	98
Sub Total				1580	1248	332
111	8	181.00	3.0	542	380	162
Sub Total				542	380	162
112	15	1.74	100.0	174	47	127
112	3	313.00	10.0	3130	2566	564
112	7	168.00	4.0	673	437	236
112	8	29.00	3.0	89	62	27
Sub Total				4066	3112	954
113	1	71.00	12.0	853	699	154
113	3	187.00	10.0	1870	1534	336
113	41	72.71	8.0	581	116	465
113	7	138.00	4.0	553	359	194
113	8	300.00	3.0	900	630	270
Sub Total				4757	3338	1419
114	2	5.00	10.0	48	40	8
114	3	329.00	10.0	3290	2698	592
114	4	299.00	8.0	2393	2034	359
114	7	340.00	4.0	1360	884	476
Sub Total				7091	5656	1435
115	3	46.00	10.0	459	377	82
115	7	24.00	4.0	95	62	33
Sub Total				554	439	115
116	12	2.00	500.0	1000	200	800
116	2	5.00	10.0	48	40	8
116	3	113.00	10.0	1130	926	204
116	7	64.00	4.0	256	166	90
Sub Total				2434	1332	1102
117	16	32.07	240.0	7696	1539	6157
117	21	55.69	110.0	6127	1348	4779
117	32	64.21	4.0	256	64	192
Sub Total				14079	2951	11128

Indio General Plan Traffic Model
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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
118	19	45.96	360.0	16545	3805	12740
118	20	70.26	180.0	12646	2782	9864
Sub Total				29191	6587	22604
119	13	51.85	360.0	18666	4293	14373
119	19	6.50	360.0	2340	538	1802
Sub Total				21006	4831	16175
120	3	404.00	10.0	4041	3313	728
Sub Total				4041	3313	728
121	19	26.41	360.0	9508	2187	7321
121	20	11.54	180.0	2077	457	1620
Sub Total				11585	2644	8941
122	20	44.57	180.0	8023	1765	6258
Sub Total				8023	1765	6258
123	2	93.00	10.0	930	762	168
123	3	581.00	10.0	5810	4764	1046
Sub Total				6740	5526	1214
124	2	214.00	10.0	2141	1755	386
124	3	359.00	10.0	3590	2944	646
Sub Total				5731	4699	1032
125	2	435.00	10.0	4348	3566	782
Sub Total				4348	3566	782
126	2	416.00	10.0	4159	3411	748
Sub Total				4159	3411	748
127	3	516.00	10.0	5159	4231	928
Sub Total				5159	4231	928
128	3	527.00	10.0	5270	4322	948
Sub Total				5270	4322	948

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
129	2	629.00	10.0	6290	5158	1132
129	3	110.00	10.0	1100	902	198
Sub Total				7390	6060	1330
130	2	415.00	10.0	4148	3402	746
Sub Total				4148	3402	746
131	2	426.00	10.0	4259	3493	766
Sub Total				4259	3493	766
132	19	4.01	360.0	1443	332	1111
132	20	97.46	180.0	17542	3859	13683
Sub Total				18985	4191	14794
133	20	52.74	180.0	9494	2089	7405
Sub Total				9494	2089	7405
134	7	830.00	4.0	3320	2158	1162
Sub Total				3320	2158	1162
135	7	1153.00	4.0	4612	2998	1614
Sub Total				4612	2998	1614
136	43	62.60	2.0	125	25	100
136	7	1155.00	4.0	4620	3003	1617
Sub Total				4745	3028	1717
137	7	543.00	4.0	2173	1412	761
Sub Total				2173	1412	761
138	7	915.00	4.0	3660	2379	1281
Sub Total				3660	2379	1281
139	7	590.00	4.0	2360	1534	826
Sub Total				2360	1534	826

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
140	43	310.30	2.0	620	124	496
140	7	614.00	4.0	2456	1596	860
Sub Total				3076	1720	1356
141	43	6.70	2.0	14	3	11
141	3	45.00	10.0	448	368	80
141	4	789.00	8.0	6313	5366	947
Sub Total				6775	5737	1038
142	43	103.40	2.0	206	41	165
Sub Total				206	41	165
143	1	1.00	12.0	12	10	2
143	43	260.00	2.0	520	104	416
Sub Total				532	114	418
144	12	2.68	500.0	1340	268	1072
144	21	15.45	110.0	1700	374	1326
144	3	172.00	10.0	1719	1410	309
144	40	25.95	40.0	1039	156	883
144	7	93.00	4.0	373	242	131
Sub Total				6171	2450	3721
145	12	12.00	500.0	6000	1200	4800
145	15	14.60	100.0	1460	394	1066
145	4	408.00	8.0	3264	2774	490
145	41	122.40	8.0	980	196	784
145	5	719.00	7.0	5033	4278	755
145	7	539.00	4.0	2156	1401	755
Sub Total				18893	10243	8650
146	1	1.00	12.0	12	10	2
146	43	241.00	2.0	481	96	385
Sub Total				493	106	387
148	1	1.00	12.0	12	10	2
148	2	29.00	10.0	290	238	52
148	3	482.00	10.0	4819	3952	867
148	7	275.00	4.0	1100	715	385
Sub Total				6221	4915	1306

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Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
149	3	731.00	10.0	7310	5994	1316
149	7	393.00	4.0	1573	1022	551
Sub Total				8883	7016	1867
150	2	34.00	10.0	341	279	62
150	3	651.00	10.0	6510	5338	1172
150	7	369.00	4.0	1475	959	516
Sub Total				8326	6576	1750
151	3	429.00	10.0	4290	3518	772
151	7	231.00	4.0	925	601	324
151	8	592.00	3.0	1777	1244	533
Sub Total				6992	5363	1629
152	2	137.00	10.0	1370	1124	246
152	3	345.00	10.0	3448	2828	620
152	7	259.00	4.0	1035	673	362
Sub Total				5853	4625	1228
153	4	690.00	8.0	5520	4692	828
153	7	371.00	4.0	1485	965	520
153	8	38.00	3.0	113	79	34
Sub Total				7118	5736	1382
154	3	255.00	10.0	2548	2090	458
154	7	137.00	4.0	547	356	191
154	8	103.00	3.0	310	217	93
Sub Total				3405	2663	742
155	7	363.00	4.0	1453	944	509
155	8	673.00	3.0	2020	1414	606
Sub Total				3473	2358	1115
156	11	0.94	700.0	658	145	513
156	13	30.00	360.0	10800	2484	8316
156	16	30.00	240.0	7200	1440	5760
156	3	33.00	10.0	330	270	60
156	7	17.00	4.0	68	44	24
Sub Total				19056	4383	14673

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
157	1	1.00	12.0	12	10	2
157	2	18.00	10.0	181	148	33
157	3	1236.00	10.0	12359	10135	2224
157	34	0.46	90.0	41	8	33
157	4	172.00	8.0	1377	1170	207
157	5	486.00	7.0	3402	2892	510
157	7	1030.00	4.0	4120	2678	1442
157	8	610.00	3.0	1830	1281	549
Sub Total				23322	18322	5000
158	7	195.00	4.0	780	507	273
158	8	362.00	3.0	1087	761	326
Sub Total				1867	1268	599
159	12	21.00	500.0	10500	2100	8400
Sub Total				10500	2100	8400
160	12	28.00	500.0	14000	2800	11200
Sub Total				14000	2800	11200
161	20	26.44	180.0	4759	1047	3712
Sub Total				4759	1047	3712
162	11	7.00	700.0	4900	1078	3822
162	3	424.00	10.0	4241	3477	764
162	4	470.00	8.0	3760	3196	564
162	40	6.90	40.0	275	41	234
162	43	71.90	2.0	145	29	116
Sub Total				13321	7821	5500
163	3	157.00	10.0	1570	1288	282
163	43	33.95	2.0	69	14	55
Sub Total				1639	1302	337
164	20	9.50	180.0	1709	376	1333
164	3	199.00	10.0	1990	1632	358
Sub Total				3699	2008	1691
165	3	355.00	10.0	3548	2910	638
Sub Total				3548	2910	638

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
166	12	27.00	500.0	13500	2700	10800
166	19	12.36	360.0	4449	1023	3426
166	3	61.00	10.0	610	500	110
166	4	105.00	8.0	840	714	126
Sub Total				19399	4937	14462
167	3	357.00	10.0	3570	2928	642
167	34	67.81	90.0	6103	1221	4882
Sub Total				9673	4149	5524
168	3	611.00	10.0	6110	5010	1100
168	34	0.60	90.0	54	11	43
168	50	19.85	180.0	3574	1251	2323
Sub Total				9738	6272	3466
169	3	630.00	10.0	6300	5166	1134
169	34	11.25	90.0	1014	203	811
169	50	19.34	180.0	3480	1218	2262
Sub Total				10794	6587	4207
170	3	172.00	10.0	1719	1410	309
170	3	301.00	10.0	3010	2468	542
170	34	22.73	90.0	2046	409	1637
Sub Total				6775	4287	2488
171	12	13.12	500.0	6560	1312	5248
171	34	10.25	90.0	923	185	738
Sub Total				7483	1497	5986
172	4	476.00	8.0	3807	3236	571
Sub Total				3807	3236	571
173	3	446.00	10.0	4459	3657	802
173	4	451.00	8.0	3607	3066	541
Sub Total				8066	6723	1343
174	3	457.00	10.0	4570	3748	822
174	30	51.81	60.0	3109	311	2798
174	50	24.71	180.0	4449	1557	2892
Sub Total				12128	5616	6512

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
175	3	676.00	10.0	6759	5543	1216
175	34	13.13	90.0	1181	236	945
175	50	17.81	180.0	3205	1122	2083
Sub Total				11145	6901	4244
176	3	318.00	10.0	3181	2608	573
Sub Total				3181	2608	573
177	3	136.00	10.0	1359	1115	244
177	3	16.00	10.0	159	131	28
177	34	2.77	90.0	249	50	199
177	43	918.56	2.0	1837	367	1470
Sub Total				3604	1663	1941
178	3	337.00	10.0	3370	2764	606
178	34	9.09	90.0	819	164	655
Sub Total				4189	2928	1261
179	3	751.00	10.0	7510	6158	1352
Sub Total				7510	6158	1352
180	11	17.73	700.0	12411	2730	9681
180	4	105.00	8.0	840	714	126
180	3	403.00	10.0	4030	3304	726
180	4	286.00	8.0	2287	1944	343
Sub Total				19568	8692	10876
181	13	73.01	360.0	26283	6045	20238
181	19	9.64	360.0	3470	798	2672
181	5	115.00	7.0	804	684	120
Sub Total				30557	7527	23030
182	13	38.04	360.0	13695	3150	10545
182	19	10.93	360.0	3934	905	3029
182	20	37.15	180.0	6686	1471	5215
Sub Total				24315	5526	18789

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
183	12	35.07	500.0	17536	3507	14029
183	4	220.00	8.0	1760	1496	264
183	3	375.00	10.0	3748	3074	674
Sub Total				23044	8077	14967
184	3	637.00	10.0	6370	5224	1146
184	34	15.20	90.0	1369	274	1095
Sub Total				7739	5498	2241
185	3	236.00	10.0	2359	1935	424
185	34	1.28	90.0	115	23	92
Sub Total				2474	1958	516
186	1	14.00	12.0	168	138	30
Sub Total				168	138	30
187	1	17.57	12.0	212	174	38
187	3	144.00	10.0	1441	1181	260
Sub Total				1653	1355	298
188	3	425.00	10.0	4248	3484	764
188	34	14.05	90.0	1265	253	1012
Sub Total				5513	3737	1776
189	12	30.57	500.0	15286	3057	12229
189	3	107.00	10.0	1070	878	192
189	3	335.00	10.0	3348	2746	602
Sub Total				19704	6681	13023
190	12	29.78	500.0	14890	2978	11912
190	20	66.20	180.0	11917	2622	9295
Sub Total				26807	5600	21207
191	3	455.00	10.0	4548	3730	818
191	19	25.25	360.0	9091	2091	7000
Sub Total				13639	5821	7818

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
192	3	430.00	10.0	4300	3526	774
192	41	60.60	8.0	484	97	387
Sub Total				4784	3623	1161
193	3	302.00	10.0	3019	2476	543
193	34	18.22	90.0	1640	328	1312
Sub Total				4659	2804	1855
194	1	17.67	12.0	212	174	38
194	3	259.00	10.0	2590	2124	466
Sub Total				2802	2298	504
195	1	20.00	12.0	241	197	44
Sub Total				241	197	44
196	1	10.58	12.0	127	104	23
196	3	67.00	10.0	670	550	120
Sub Total				797	654	143
197	3	292.00	10.0	2919	2394	525
197	3	54.00	10.0	541	443	98
197	34	0.32	90.0	29	6	23
197	34	22.53	90.0	2028	406	1622
Sub Total				5517	3249	2268
198	3	334.00	10.0	3341	2739	602
198	30	50.94	60.0	3057	306	2751
Sub Total				6398	3045	3353
199	11	2.14	700.0	1499	330	1169
199	3	468.00	10.0	4681	3838	843
199	40	4.97	40.0	199	30	169
Sub Total				6379	4198	2181
200	19	27.67	360.0	9961	2291	7670
Sub Total				9961	2291	7670

Indio General Plan Traffic Model
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Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
201	19	33.54	360.0	12074	2777	9297
201	4	1347.00	8.0	10777	9160	1617
Sub Total				22851	11937	10914
202	11	1.94	700.0	1358	299	1059
202	4	1755.00	8.0	14040	11934	2106
Sub Total				15398	12233	3165
203	3	681.00	10.0	6810	5584	1226
203	34	18.23	90.0	1640	328	1312
Sub Total				8450	5912	2538
204	3	293.00	10.0	2930	2402	528
204	34	3.52	90.0	317	63	254
Sub Total				3247	2465	782
206	1	17.00	12.0	203	167	36
Sub Total				203	167	36
207	3	238.00	10.0	2381	1952	429
Sub Total				2381	1952	429
208	3	632.00	10.0	6319	5182	1137
208	34	18.76	90.0	1689	338	1351
Sub Total				8008	5520	2488
209	3	362.00	10.0	3619	2968	651
209	34	2.98	90.0	269	54	215
Sub Total				3888	3022	866
210	3	645.00	10.0	6448	5288	1160
210	34	11.32	90.0	1019	204	815
Sub Total				7467	5492	1975
211	43	160.62	2.0	321	64	257
211	43	26.35	2.0	54	11	43
211	19	6.28	360.0	2261	520	1741
Sub Total				2636	595	2041

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
212	13	61.53	360.0	22151	5095	17056
212	43	0.63	2.0	1	0	1
212	43	72.28	2.0	145	29	116
Sub Total				22297	5124	17173
213	12	35.19	500.0	17594	3519	14075
213	21	33.40	110.0	3673	808	2865
213	3	79.00	10.0	790	648	142
213	43	0.53	2.0	0	0	0
213	43	46.75	2.0	94	19	75
Sub Total				22151	4994	17157
214	43	145.26	2.0	291	58	233
Sub Total				291	58	233
215	3	548.00	10.0	5481	4494	987
215	34	34.68	90.0	3121	624	2497
Sub Total				8602	5118	3484
216	3	310.00	10.0	3100	2542	558
216	34	0.66	90.0	60	12	48
Sub Total				3160	2554	606
217	1	5.00	12.0	59	49	10
Sub Total				59	49	10
218	1	5.00	12.0	59	49	10
Sub Total				59	49	10
219	1	19.41	12.0	233	191	42
Sub Total				233	191	42
220	3	479.00	10.0	4790	3928	862
220	34	2.70	90.0	243	49	194
Sub Total				5033	3977	1056

Indio General Plan Traffic Model
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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
221	3	165.00	10.0	1648	1352	296
221	43	54.62	2.0	109	22	87
221	3	87.00	10.0	870	714	156
221	34	15.06	90.0	1355	271	1084
Sub Total				3982	2359	1623
222	12	40.98	500.0	20490	4098	16392
222	3	191.00	10.0	1910	1566	344
222	43	46.83	2.0	94	19	75
Sub Total				22494	5683	16811
223	12	29.43	500.0	14714	2943	11771
223	43	89.18	2.0	179	36	143
Sub Total				14893	2979	11914
224	12	34.32	500.0	17160	3432	13728
224	43	269.97	2.0	540	108	432
Sub Total				17700	3540	14160
225	43	159.21	2.0	319	64	255
Sub Total				319	64	255
226	43	305.16	2.0	611	122	489
Sub Total				611	122	489
227	43	251.32	2.0	503	101	402
Sub Total				503	101	402
228	3	14.00	10.0	141	115	26
228	43	206.32	2.0	414	83	331
Sub Total				555	198	357
229	43	1.00	2.0	1	0	1
Sub Total				1	0	1
230	43	1.00	2.0	1	0	1
Sub Total				1	0	1

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
231	21	111.38	110.0	12251	2695	9556
231	4	40.00	8.0	320	272	48
231	43	26.09	2.0	51	10	41
Sub Total				12622	2977	9645
232	3	1.00	10.0	10	8	2
232	4	154.00	8.0	1233	1048	185
232	43	98.56	2.0	197	39	158
Sub Total				1440	1095	345
233	3	250.00	10.0	2500	2050	450
233	4	397.00	8.0	3177	2700	477
233	43	113.94	2.0	229	46	183
Sub Total				5906	4796	1110
234	21	106.88	110.0	11756	2586	9170
234	4	75.00	8.0	600	510	90
Sub Total				12356	3096	9260
235	12	14.62	500.0	7310	1462	5848
235	21	47.83	110.0	5261	1157	4104
235	21	5.61	110.0	618	136	482
235	4	403.00	8.0	3223	2740	483
Sub Total				16412	5495	10917
236	23	134.08	10.0	1340	335	1005
236	3	428.00	10.0	4281	3510	771
236	43	7.88	2.0	15	3	12
Sub Total				5636	3848	1788
237	23	59.47	10.0	595	149	446
237	3	389.00	10.0	3890	3190	700
237	43	73.81	2.0	148	30	118
Sub Total				4633	3369	1264
238	3	258.00	10.0	2581	2116	465
238	43	71.71	2.0	145	29	116
Sub Total				2726	2145	581

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
239	22	18.89	70.0	1322	291	1031
239	3	130.00	10.0	1300	1066	234
239	43	58.19	2.0	115	23	92
239	19	0.21	360.0	75	17	58
239	22	32.75	70.0	2292	504	1788
Sub Total				5104	1901	3203
240	23	137.61	10.0	1376	344	1032
240	3	3.00	10.0	30	24	6
Sub Total				1406	368	1038
241	12	29.74	500.0	14870	2974	11896
241	3	281.00	10.0	2810	2304	506
Sub Total				17680	5278	12402
242	12	15.61	500.0	7804	1561	6243
242	4	790.00	8.0	6320	5372	948
Sub Total				14124	6933	7191
243	12	64.06	500.0	32030	6406	25624
243	4	526.00	8.0	4207	3576	631
Sub Total				36237	9982	26255
244	12	23.64	500.0	11820	2364	9456
244	4	688.00	8.0	5503	4678	825
Sub Total				17323	7042	10281
245	12	20.13	500.0	10064	2013	8051
245	4	696.00	8.0	5567	4732	835
Sub Total				15631	6745	8886
246	12	23.78	500.0	11890	2378	9512
246	4	681.00	8.0	5446	4630	816
Sub Total				17336	7008	10328
247	12	26.53	500.0	13266	2653	10613
247	4	678.00	8.0	5423	4610	813
Sub Total				18689	7263	11426

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
248	3	402.00	10.0	4019	3296	723
248	4	36.00	8.0	287	244	43
Sub Total				4306	3540	766
249	3	402.00	10.0	4019	3296	723
249	4	37.00	8.0	297	252	45
Sub Total				4316	3548	768
250	3	441.00	10.0	4410	3616	794
250	4	38.00	8.0	303	258	45
Sub Total				4713	3874	839
251	3	440.00	10.0	4400	3608	792
Sub Total				4400	3608	792
252	12	37.89	500.0	18946	3789	15157
252	3	425.00	10.0	4248	3484	764
Sub Total				23194	7273	15921
253	11	1.02	700.0	714	157	557
253	19	28.26	360.0	10173	2340	7833
253	3	113.00	10.0	1130	926	204
Sub Total				12017	3423	8594
254	21	88.57	110.0	9742	2143	7599
Sub Total				9742	2143	7599
255	20	12.40	180.0	2232	491	1741
255	3	209.00	10.0	2090	1714	376
255	30	9.41	60.0	563	56	507
255	5	787.00	7.0	5508	4682	826
Sub Total				10393	6943	3450
256	2	3.00	10.0	30	24	6
256	3	453.00	10.0	4530	3714	816
Sub Total				4560	3738	822
257	3	437.00	10.0	4370	3584	786
Sub Total				4370	3584	786

Indio General Plan Traffic Model
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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
258	3	48.00	10.0	481	394	87
258	8	555.00	3.0	1667	1167	500
Sub Total				2148	1561	587
259	3	135.00	10.0	1348	1106	242
259	4	358.00	8.0	2864	2434	430
259	40	1.40	40.0	55	8	47
259	8	129.00	3.0	389	272	117
Sub Total				4656	3820	836
260	3	307.00	10.0	3070	2518	552
260	4	129.00	8.0	1033	878	155
260	40	16.56	40.0	662	99	563
Sub Total				4765	3495	1270
261	3	60.00	10.0	600	492	108
261	40	118.50	40.0	4740	711	4029
Sub Total				5340	1203	4137
262	4	10.00	8.0	80	68	12
262	40	20.66	40.0	826	124	702
262	8	474.00	3.0	1421	995	426
Sub Total				2327	1187	1140
263	3	429.00	10.0	4290	3518	772
263	8	51.00	3.0	153	107	46
Sub Total				4443	3625	818
264	2	108.00	10.0	1081	886	195
264	11	1.36	700.0	951	209	742
264	4	563.00	8.0	4503	3828	675
Sub Total				6535	4923	1612
265	2	227.00	10.0	2270	1862	408
Sub Total				2270	1862	408
266	3	313.00	10.0	3130	2566	564
266	4	324.00	8.0	2593	2204	389
Sub Total				5723	4770	953

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
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267	19	22.37	360.0	8052	1852	6200
267	3	207.00	10.0	2070	1698	372
267	30	24.15	60.0	1449	145	1304
267	33	10.33	500.0	5165	1033	4132
267	40	11.37	40.0	455	68	387
267	5	219.00	7.0	1533	1303	230
<hr/>						
Sub Total				18724	6099	12625
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268	19	12.32	360.0	4435	1020	3415
268	19	33.38	360.0	12017	2764	9253
268	22	1.98	70.0	137	30	107
<hr/>						
Sub Total				16589	3814	12775
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269	22	153.25	70.0	10727	2360	8367
269	19	8.60	360.0	3096	712	2384
269	21	15.12	110.0	1663	366	1297
269	22	24.03	70.0	1682	370	1312
269	34	0.21	90.0	20	4	16
<hr/>						
Sub Total				17188	3812	13376
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270	22	86.69	70.0	6069	1335	4734
270	21	2.06	110.0	227	50	177
270	22	19.42	70.0	1360	299	1061
270	34	90.84	90.0	8175	1635	6540
<hr/>						
Sub Total				15831	3319	12512
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271	19	16.86	360.0	6070	1396	4674
271	21	96.40	110.0	10604	2333	8271
271	22	68.98	70.0	4828	1062	3766
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Sub Total				21502	4791	16711
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272	21	28.49	110.0	3133	689	2444
272	22	34.44	70.0	2410	530	1880
272	33	9.29	500.0	4645	929	3716
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Sub Total				10188	2148	8040

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
-----	-----	-----	-----	-----	-----	-----
273	11	1.02	700.0	714	157	557
273	12	11.08	500.0	5540	1108	4432
273	19	7.02	360.0	2527	581	1946
273	20	31.30	180.0	5633	1239	4394
273	3	265.00	10.0	2648	2172	476
273	30	22.29	60.0	1338	134	1204
273	5	67.00	7.0	468	398	70
				-----	-----	-----
		Sub Total		18868	5789	13079
274	11	1.06	700.0	742	163	579
274	12	7.14	500.0	3570	714	2856
274	19	14.38	360.0	5178	1191	3987
274	3	78.00	10.0	781	640	141
				-----	-----	-----
		Sub Total		10271	2708	7563
275	12	4.42	500.0	2210	442	1768
275	3	399.00	10.0	3990	3272	718
275	30	7.48	60.0	449	45	404
275	33	3.32	500.0	1660	332	1328
275	40	5.65	40.0	226	34	192
				-----	-----	-----
		Sub Total		8535	4125	4410
276	12	12.50	500.0	6250	1250	5000
276	19	0.42	360.0	152	35	117
276	21	68.70	110.0	7558	1663	5895
276	22	64.30	70.0	4500	990	3510
276	3	56.00	10.0	559	459	100
				-----	-----	-----
		Sub Total		19019	4397	14622
277	19	22.18	360.0	7985	1837	6148
277	40	9.67	40.0	386	58	328
				-----	-----	-----
		Sub Total		8371	1895	6476
278	12	12.34	500.0	6170	1234	4936
278	19	42.51	360.0	15304	3520	11784
278	33	3.38	500.0	1689	338	1351
				-----	-----	-----
		Sub Total		23163	5092	18071
279	3	177.00	10.0	1770	1452	318
279	42	25.89	5.0	128	19	109
				-----	-----	-----
		Sub Total		1898	1471	427

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
280	42	69.01	5.0	345	52	293
		Sub Total		345	52	293
281	42	69.44	5.0	347	52	295
		Sub Total		347	52	295
282	3	231.00	10.0	2310	1894	416
282	33	8.59	500.0	4295	859	3436
		Sub Total		6605	2753	3852
283	11	7.05	700.0	4935	1086	3849
283	34	1.03	90.0	94	19	75
283	4	4583.00	8.0	36664	31164	5500
		Sub Total		41693	32269	9424
284	8	567.00	3.0	1701	1191	510
		Sub Total		1701	1191	510
285	8	509.00	3.0	1528	1070	458
		Sub Total		1528	1070	458
286	12	22.23	500.0	11116	2223	8893
286	3	9.00	10.0	90	74	16
286	40	109.40	40.0	4375	656	3719
286	8	5.00	3.0	17	12	5
		Sub Total		15598	2965	12633
287	12	26.58	500.0	13290	2658	10632
287	3	225.00	10.0	2248	1844	404
287	8	91.00	3.0	273	191	82
		Sub Total		15811	4693	11118
288	8	446.00	3.0	1338	937	401
		Sub Total		1338	937	401
289	8	501.00	3.0	1503	1052	451
		Sub Total		1503	1052	451

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
290	16	23.39	240.0	5614	1123	4491
290	3	382.00	10.0	3819	3132	687
290	5	139.00	7.0	974	827	147
Sub Total				10407	5082	5325
291	12	13.88	500.0	6940	1388	5552
291	13	39.17	360.0	14101	3243	10858
291	16	8.36	240.0	2006	401	1605
291	3	206.00	10.0	2059	1689	370
291	40	3.27	40.0	132	20	112
291	5	180.00	7.0	1260	1071	189
Sub Total				26498	7812	18686
292	12	37.22	500.0	18610	3722	14888
292	12	6.02	500.0	3010	602	2408
292	19	19.04	360.0	6855	1577	5278
292	3	122.00	10.0	1219	1000	219
292	3	42.00	10.0	419	344	75
292	4	165.00	8.0	1320	1122	198
292	4	79.00	8.0	633	538	95
292	5	396.00	7.0	2773	2357	416
Sub Total				34839	11262	23577
293	19	19.54	360.0	7034	1618	5416
293	19	8.84	360.0	3182	732	2450
293	3	228.00	10.0	2281	1870	411
293	3	55.00	10.0	548	450	98
293	30	11.48	60.0	689	69	620
Sub Total				13734	4739	8995
294	19	13.20	360.0	4752	1093	3659
294	22	4.17	70.0	291	64	227
294	3	409.00	10.0	4090	3354	736
294	4	17.00	8.0	136	116	20
294	40	1.43	40.0	58	9	49
Sub Total				9327	4636	4691
295	19	14.46	360.0	5205	1197	4008
295	22	76.26	70.0	5337	1174	4163
Sub Total				10542	2371	8171

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
296	12	8.62	500.0	4310	862	3448
296	3	164.00	10.0	1641	1345	296
296	4	367.00	8.0	2936	2496	440
Sub Total				8887	4703	4184
297	12	31.75	500.0	15876	3175	12701
297	3	142.00	10.0	1419	1164	255
297	5	78.00	7.0	545	464	81
Sub Total				17840	4803	13037
298	3	250.00	10.0	2500	2050	450
298	34	1.82	90.0	165	33	132
298	40	3.03	40.0	121	18	103
Sub Total				2786	2101	685
299	16	1.58	240.0	380	76	304
299	3	308.00	10.0	3081	2526	555
299	30	10.04	60.0	602	60	542
299	4	45.00	8.0	360	306	54
299	5	526.00	7.0	3682	3130	552
Sub Total				8105	6098	2007
300	12	26.84	500.0	13420	2684	10736
300	30	40.41	60.0	2423	242	2181
300	5	71.00	7.0	497	422	75
Sub Total				16340	3348	12992
301	12	47.70	500.0	23850	4770	19080
301	16	18.14	240.0	4354	871	3483
Sub Total				28204	5641	22563
302	12	17.78	500.0	8890	1778	7112
302	16	56.03	240.0	13447	2689	10758
302	3	60.00	10.0	600	492	108
302	4	330.00	8.0	2640	2244	396
302	5	236.00	7.0	1654	1405	249
Sub Total				27231	8608	18623

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
-----	-----	-----	-----	-----	-----	-----
303	3	271.00	10.0	2710	2222	488
303	4	1419.00	8.0	11354	9650	1704
303	5	385.00	7.0	2696	2291	405
		Sub Total		16760	14163	2597
304	1	126.00	12.0	1512	1240	272
		Sub Total		1512	1240	272
305	1	82.00	12.0	985	807	178
		Sub Total		985	807	178
306	1	66.00	12.0	791	649	142
306	11	11.36	700.0	7951	1749	6202
		Sub Total		8742	2398	6344
307	1	70.00	12.0	841	689	152
		Sub Total		841	689	152
308	1	78.00	12.0	937	768	169
		Sub Total		937	768	169
309	3	289.00	10.0	2890	2370	520
309	34	6.25	90.0	563	113	450
		Sub Total		3453	2483	970
310	12	30.43	500.0	15214	3043	12171
310	4	275.00	8.0	2200	1870	330
		Sub Total		17414	4913	12501
311	12	29.29	500.0	14644	2929	11715
311	34	5.51	90.0	495	99	396
311	4	412.00	8.0	3297	2802	495
		Sub Total		18436	5830	12606
312	12	14.26	500.0	7130	1426	5704
312	3	52.00	10.0	519	426	93
312	4	272.00	8.0	2177	1850	327
312	5	272.00	7.0	1903	1618	285
		Sub Total		11729	5320	6409

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
313	12	12.92	500.0	6460	1292	5168
313	3	114.00	10.0	1141	935	206
313	34	6.45	90.0	580	116	464
313	4	260.00	8.0	2080	1768	312
Sub Total				10261	4111	6150
314	3	431.00	10.0	4310	3534	776
314	30	11.57	60.0	693	69	624
314	34	7.89	90.0	711	142	569
314	40	5.60	40.0	225	34	191
Sub Total				5939	3779	2160
315	3	458.00	10.0	4581	3756	825
315	34	3.39	90.0	305	61	244
Sub Total				4886	3817	1069
316	3	451.00	10.0	4510	3698	812
Sub Total				4510	3698	812
317	12	28.07	500.0	14036	2807	11229
317	3	144.00	10.0	1441	1181	260
Sub Total				15477	3988	11489
318	12	34.55	500.0	17274	3455	13819
318	3	248.00	10.0	2481	2034	447
318	30	9.91	60.0	593	59	534
318	33	1.23	500.0	615	123	492
318	4	386.00	8.0	3087	2624	463
Sub Total				24050	8295	15755
319	12	67.35	500.0	33674	6735	26939
319	4	435.00	8.0	3480	2958	522
Sub Total				37154	9693	27461
320	12	28.89	500.0	14446	2889	11557
320	4	1297.00	8.0	10377	8820	1557
Sub Total				24823	11709	13114

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Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
321	3	621.00	10.0	6210	5092	1118
321	34	1.67	90.0	151	30	121
Sub Total				6361	5122	1239
322	3	654.00	10.0	6541	5363	1178
Sub Total				6541	5363	1178
323	2	377.00	10.0	3770	3092	678
323	34	9.03	90.0	814	163	651
Sub Total				4584	3255	1329
324	11	6.98	700.0	4886	1075	3811
324	2	272.00	10.0	2719	2230	489
Sub Total				7605	3305	4300
325	11	9.74	700.0	6818	1500	5318
325	14	0.78	300.0	233	63	170
325	3	649.00	10.0	6490	5322	1168
Sub Total				13541	6885	6656
326	2	73.00	10.0	730	598	132
326	3	230.00	10.0	2300	1886	414
Sub Total				3030	2484	546
327	2	269.00	10.0	2690	2206	484
327	3	84.00	10.0	841	689	152
Sub Total				3531	2895	636
328	3	596.00	10.0	5959	4887	1072
328	41	2.23	8.0	19	4	15
Sub Total				5978	4891	1087

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n Code	Units	Rate	Total Trip Ends	Trip Productions	Trip Attractions
329	11	15.92	700.0	11145	2452	8693
329	12	0.80	500.0	400	80	320
329	15	58.76	100.0	5877	1587	4290
329	16	9.78	240.0	2347	469	1878
329	4	447.00	8.0	3577	3040	537
329	40	1.12	40.0	45	7	38
329	41	202.60	8.0	1620	324	1296
329	42	4.37	5.0	21	3	18
329	8	1952.00	3.0	5858	4100	1758
Sub Total				30890	12062	18828
330	12	35.84	500.0	17920	3584	14336
330	15	31.35	100.0	3135	846	2289
330	34	31.50	90.0	2835	567	2268
330	4	152.00	8.0	1216	1034	182
330	40	2.07	40.0	82	12	70
330	41	264.06	8.0	2111	422	1689
330	8	1738.00	3.0	5213	3649	1564
Sub Total				32512	10114	22398
331	3	792.00	10.0	7919	6494	1425
331	41	7.07	8.0	56	11	45
Sub Total				7975	6505	1470
332	3	666.00	10.0	6659	5461	1198
332	41	121.05	8.0	969	194	775
Sub Total				7628	5655	1973
333	11	9.12	700.0	6383	1404	4979
333	15	74.31	100.0	7430	2006	5424
333	3	251.00	10.0	2510	2058	452
333	34	19.75	90.0	1779	356	1423
333	40	4.60	40.0	185	28	157
333	41	29.60	8.0	236	47	189
333	5	146.00	7.0	1022	869	153
333	50	9.08	180.0	1635	572	1063
333	8	1051.00	3.0	3153	2207	946
Sub Total				24333	9547	14786

Indio General Plan Traffic Model
Buildout Land Use

Traffic Analysis Zone	G e n e r a t i o n			Total Trip Ends	Trip Productions	Trip Attractions
	Code	Units	Rate			
334	11	4.23	700.0	2961	651	2310
334	3	1169.00	10.0	11690	9586	2104
334	34	2.71	90.0	245	49	196
334	40	69.44	40.0	2778	417	2361
334	8	6496.00	3.0	19489	13642	5847
Sub Total				37163	24345	12818
335	14	38.30	300.0	11489	3102	8387
335	3	712.00	10.0	7119	5838	1281
335	40	2.93	40.0	118	18	100
335	41	166.38	8.0	1331	266	1065
335	8	827.00	3.0	2481	1737	744
Sub Total				22538	10961	11577
336	12	27.95	500.0	13974	2795	11179
336	19	12.85	360.0	4626	1064	3562
Sub Total				18600	3859	14741
337	16	0.94	240.0	225	45	180
337	3	1288.00	10.0	12881	10562	2319
Sub Total				13106	10607	2499
338	11	13.85	700.0	9695	2133	7562
338	3	428.00	10.0	4281	3510	771
Sub Total				13976	5643	8333
339	2	4.00	10.0	41	33	8
339	3	574.00	10.0	5741	4707	1034
Sub Total				5782	4740	1042
340	2	140.00	10.0	1400	1148	252
340	3	184.00	10.0	1841	1509	332
Sub Total				3241	2657	584
341	3	412.00	10.0	4119	3378	741
341	8	2.00	3.0	7	5	2
Sub Total				4126	3383	743
Network Totals				2943448	1356369	1587079

APPENDIX D

GENERAL PLAN PREFERRED LAND USE PRODUCTIONS
AND ATTRACTIONS TRIP GENERATION BY ZONE

GP	66	1	2389	5194	2363
GP	67	1	4094	8887	3567
GP	68	1	415	894	984
GP	69	1	133	554	447
GP	70	1	558	1479	849
GP	71	1	559	1941	425
GP	72	1	1230	2642	739
GP	73	1	1135	2441	640
GP	74	1	187	935	163
GP	75	1	235	1173	255
GP	76	1	92	458	80
GP	77	1	81	295	88
GP	78	1	174	872	151
GP	79	1	571	2853	497
GP	80	1	374	1351	325
GP	81	1	571	2063	580
GP	82	1	736	1581	1900
GP	83	1	1186	2579	1382
GP	84	1	626	1347	204
GP	85	1	373	803	467
GP	86	1	204	738	177
GP	87	1	896	2522	1804
GP	88	1	632	1358	218
GP	89	1	564	1210	217
GP	90	1	588	1266	192
GP	91	1	5861	12996	1594
GP	92	1	1832	4940	790
GP	93	1	1860	3998	608
GP	94	1	1582	3400	516
GP	95	1	266	599	90
GP	96	1	335	719	110
GP	97	1	392	842	128
GP	98	1	0	0	25
GP	100	1	2369	5229	662
GP	101	1	0	0	4522
GP	102	1	61	303	53
GP	103	1	65	141	22
GP	104	1	1562	3354	493
GP	105	1	1615	3463	510
GP	106	1	1515	3255	495
GP	107	1	2534	5437	800
GP	108	1	146	316	687
GP	109	1	1228	2640	525
GP	110	1	354	761	116
GP	111	1	54	272	47
GP	112	1	861	1875	327
GP	113	1	826	2032	418
GP	114	1	1604	3495	485
GP	115	1	124	269	40
GP	116	1	321	691	278
GP	117	1	0	0	2567
GP	118	1	0	0	5731
GP	119	1	0	0	4203
GP	120	1	970	2060	246
GP	121	1	0	0	2300
GP	122	1	0	0	1536
GP	123	1	1617	3437	411
GP	124	1	1376	2922	349
GP	125	1	1044	2218	264
GP	126	1	998	2122	253

GP	127	1	1238	2632	314
GP	128	1	1265	2688	321
GP	129	1	1774	3769	450
GP	130	1	996	2116	252
GP	131	1	1022	2173	259
GP	132	1	0	0	3646
GP	133	1	0	0	1817
GP	134	1	498	1162	433
GP	135	1	692	1614	602
GP	136	1	693	1617	625
GP	137	1	326	760	284
GP	138	1	549	1281	478
GP	139	1	354	826	308
GP	140	1	368	860	428
GP	141	1	1686	3701	305
GP	142	1	0	0	36
GP	143	1	3	6	91
GP	144	1	469	1007	847
GP	145	1	2397	5318	2199
GP	146	1	3	6	84
GP	148	1	1395	2997	455
GP	149	1	1990	4278	651
GP	150	1	1865	4010	610
GP	151	1	1347	3399	537
GP	152	1	1312	2821	428
GP	153	1	1614	3612	444
GP	154	1	725	1647	253
GP	155	1	420	1518	365
GP	156	1	89	192	3569
GP	157	1	5008	11387	1676
GP	158	1	226	816	197
GP	159	1	0	0	1827
GP	160	1	0	0	2436
GP	161	1	0	0	911
GP	162	1	1958	4230	1421
GP	163	1	377	801	108
GP	164	1	478	1015	448
GP	165	1	852	1810	216
GP	166	1	356	773	3313
GP	167	1	857	1821	1280
GP	168	1	1645	3473	1004
GP	169	1	1686	3561	1166
GP	170	1	1135	2412	644
GP	171	1	0	0	1302
GP	172	1	952	2094	165
GP	173	1	1972	4259	428
GP	174	1	1319	2776	1323
GP	175	1	1782	3769	1175
GP	176	1	763	1622	194
GP	177	1	364	776	455
GP	178	1	809	1719	348
GP	179	1	1802	3830	458
GP	180	1	1749	3775	2756
GP	181	1	201	443	5988
GP	182	1	0	0	4808
GP	183	1	1340	2880	3356
GP	184	1	1529	3249	626
GP	185	1	566	1204	164
GP	186	1	40	86	10
GP	187	1	397	842	101

GP	188	1	1020	2167	479
GP	189	1	1061	2254	2928
GP	190	1	0	0	4872
GP	191	1	1092	2320	2096
GP	192	1	1032	2193	346
GP	193	1	725	1540	469
GP	194	1	673	1429	171
GP	195	1	58	122	15
GP	196	1	191	407	49
GP	197	1	831	1764	569
GP	198	1	802	1703	470
GP	199	1	1123	2387	599
GP	200	1	0	0	1993
GP	201	1	2694	5927	2885
GP	202	1	3510	7722	871
GP	203	1	1634	3473	700
GP	204	1	703	1494	233
GP	206	1	49	104	12
GP	207	1	571	1214	145
GP	208	1	1517	3223	679
GP	209	1	869	1846	267
GP	210	1	1548	3289	570
GP	211	1	0	0	518
GP	212	1	0	0	4458
GP	213	1	190	403	3829
GP	214	1	0	0	50
GP	215	1	1315	2795	877
GP	216	1	744	1581	199
GP	217	1	14	31	3
GP	218	1	14	31	3
GP	219	1	56	119	14
GP	220	1	1150	2443	334
GP	221	1	605	1285	408
GP	222	1	458	974	3698
GP	223	1	0	0	2592
GP	224	1	0	0	3080
GP	225	1	0	0	56
GP	226	1	0	0	106
GP	227	1	0	0	88
GP	228	1	34	71	81
GP	229	1	0	0	0
GP	230	1	0	0	0
GP	231	1	80	176	2367
GP	232	1	310	683	89
GP	233	1	1394	3022	331
GP	234	1	150	330	2276
GP	235	1	806	1773	2537
GP	236	1	1027	2183	555
GP	237	1	934	1984	392
GP	238	1	619	1316	183
GP	239	1	312	663	806
GP	240	1	7	15	301
GP	241	1	674	1433	2759
GP	242	1	1580	3476	1633
GP	243	1	1052	2314	5756
GP	244	1	1376	3027	2296
GP	245	1	1392	3062	1993
GP	246	1	1362	2996	2306
GP	247	1	1356	2983	2544
GP	248	1	1037	2208	257

GP	249	1	1039	2213	258
GP	250	1	1134	2416	282
GP	251	1	1056	2244	268
GP	252	1	1020	2167	3555
GP	253	1	271	576	2241
GP	254	1	0	0	1864
GP	255	1	1879	4096	842
GP	256	1	1094	2325	278
GP	257	1	1049	2229	266
GP	258	1	282	1078	175
GP	259	1	1079	2457	247
GP	260	1	995	2134	318
GP	261	1	144	306	655
GP	262	1	162	755	235
GP	263	1	1045	2265	274
GP	264	1	1385	3028	444
GP	265	1	545	1158	138
GP	266	1	1399	3022	304
GP	267	1	880	1899	2888
GP	268	1	0	0	3318
GP	269	1	0	0	3316
GP	270	1	0	0	2888
GP	271	1	0	0	4168
GP	272	1	0	0	1869
GP	273	1	753	1609	2981
GP	274	1	187	398	1847
GP	275	1	958	2035	985
GP	276	1	134	286	3460
GP	277	1	0	0	1649
GP	278	1	0	0	4430
GP	279	1	425	903	124
GP	280	1	0	0	45
GP	281	1	0	0	45
GP	282	1	554	1178	888
GP	283	1	9166	20165	2556
GP	284	1	170	851	148
GP	285	1	153	764	133
GP	286	1	24	54	2512
GP	287	1	567	1284	2473
GP	288	1	134	669	117
GP	289	1	150	752	131
GP	290	1	1160	2483	1252
GP	291	1	809	1744	4575
GP	292	1	1575	3435	5439
GP	293	1	679	1443	2277
GP	294	1	1016	2161	1269
GP	295	1	0	0	2063
GP	296	1	1128	2451	978
GP	297	1	478	1024	2872
GP	298	1	600	1275	197
GP	299	1	1750	3794	482
GP	300	1	124	273	2567
GP	301	1	0	0	4908
GP	302	1	1217	2667	4110
GP	303	1	4162	9108	777
GP	304	1	363	771	92
GP	305	1	236	502	60
GP	306	1	190	404	1569
GP	307	1	202	428	51
GP	308	1	225	477	57

GP	1	1	1340	2460	1620
GP	2	1	6300	11540	7620
GP	3	1	3780	6920	4570
GP	4	1	2810	5160	3410
GP	5	1	1810	3310	2190
GP	6	1	4150	7610	5030
GP	7	1	11000	24000	17030
GP	8	1	3750	6880	4540
GP	9	1	1340	2460	1620
GP	10	1	1250	2210	1460
GP	11	1	670	1230	810
GP	12	1	670	1230	810
GP	13	1	2010	3680	2430
GP	14	1	810	1480	980
GP	15	1	3150	4450	3240
GP	16	1	4500	7250	4050
GP	17	1	4500	7250	4050
GP	18	1	1340	2000	1620
GP	19	1	1340	2000	1620
GP	20	1	670	1230	810
GP	21	1	3600	6100	3240
GP	22	1	2010	3680	2430
GP	23	1	1140	2090	1380
GP	24	1	1740	3190	2110
GP	30	1	1530	3486	879
GP	31	1	0	0	5798
GP	32	1	2071	4515	2947
GP	33	1	613	1358	4803
GP	34	1	1954	4162	3577
GP	35	1	2204	5477	3423
GP	36	1	66	332	57
GP	37	1	1517	3798	1571
GP	38	1	137	499	140
GP	39	1	354	1131	253
GP	40	1	634	1363	365
GP	41	1	1868	4092	1416
GP	42	1	801	2000	303
GP	43	1	2435	5234	796
GP	44	1	805	1720	231
GP	45	1	62	141	154
GP	46	1	636	3179	553
GP	47	1	4074	8758	1649
GP	48	1	447	959	146
GP	49	1	2955	6352	966
GP	50	1	95	205	3162
GP	51	1	274	591	6019
GP	52	1	4863	10456	1589
GP	53	1	0	0	3249
GP	54	1	101	365	554
GP	55	1	695	2073	396
GP	56	1	702	2500	1177
GP	57	1	10	50	5693
GP	58	1	1057	2397	391
GP	59	1	1569	3351	438
GP	60	1	35	76	2957
GP	61	1	1677	3714	2681
GP	62	1	918	1971	300
GP	63	1	1574	3427	726
GP	64	1	559	1200	183
GP	65	1	97	486	309

GP	309	1	694	1474	274
GP	310	1	550	1210	2743
GP	311	1	824	1813	2778
GP	312	1	1145	2509	1449
GP	313	1	794	1725	1385
GP	314	1	1034	2198	476
GP	315	1	1099	2336	332
GP	316	1	1082	2300	275
GP	317	1	346	734	2530
GP	318	1	1367	2963	3450
GP	319	1	870	1914	6011
GP	320	1	2594	5707	2965
GP	321	1	1490	3167	405
GP	322	1	1570	3335	398
GP	323	1	905	1923	371
GP	324	1	653	1387	1101
GP	325	1	1558	3310	1755
GP	326	1	727	1545	184
GP	327	1	848	1800	215
GP	328	1	1430	3040	366
GP	329	1	1480	4895	4948
GP	330	1	825	3276	5231
GP	331	1	1901	4039	492
GP	332	1	1598	3397	574
GP	333	1	1255	3582	4098
GP	334	1	4755	15706	3379
GP	335	1	1957	4872	3595
GP	336	1	0	0	3357
GP	337	1	3091	6569	824
GP	338	1	1027	2183	2117
GP	339	1	1388	2947	352
GP	340	1	778	1652	197
GP	341	1	990	2104	251
GA	1	1	1220	1740	1620
GA	2	1	5720	8200	7620
GA	3	1	3430	4920	4570
GA	4	1	2550	3660	3410
GA	5	1	1640	2350	2190
GA	6	1	3770	5410	5030
GA	7	1	16250	19700	17030
GA	8	1	3410	4880	4540
GA	9	1	1220	1740	1620
GA	10	1	550	2050	1460
GA	11	1	610	870	810
GA	12	1	610	870	810
GA	13	1	1820	2620	2430
GA	14	1	730	1050	980
GA	15	1	1900	4000	3240
GA	16	1	1900	3250	4050
GA	17	1	1900	3250	4050
GA	18	1	1220	2200	1620
GA	19	1	1220	2200	1620
GA	20	1	610	870	810
GA	21	1	1400	2400	3240
GA	22	1	1820	2620	2430
GA	23	1	1030	1480	1380
GA	24	1	1580	2270	2110
GA	30	1	226	1112	879
GA	31	1	6463	10311	5798
GA	32	1	1147	4935	2947

GA	33	1	2153	8458	4803
GA	34	1	2459	6867	3577
GA	35	1	3021	5855	3423
GA	36	1	6	102	57
GA	37	1	522	3077	1571
GA	38	1	21	224	140
GA	39	1	26	360	253
GA	40	1	144	493	365
GA	41	1	649	2892	1416
GA	42	1	49	427	303
GA	43	1	176	949	796
GA	44	1	60	275	231
GA	45	1	62	311	154
GA	46	1	57	978	553
GA	47	1	413	2130	1649
GA	48	1	33	174	146
GA	49	1	214	1151	966
GA	50	1	4762	3559	3162
GA	51	1	11195	5363	6019
GA	52	1	352	1894	1589
GA	53	1	5816	3781	3249
GA	54	1	557	613	554
GA	55	1	187	544	396
GA	56	1	703	2206	1177
GA	57	1	2199	7436	5693
GA	58	1	77	485	391
GA	59	1	115	524	438
GA	60	1	5854	1635	2957
GA	61	1	4598	1807	2681
GA	62	1	67	358	300
GA	63	1	287	1712	726
GA	64	1	40	217	183
GA	65	1	124	671	309
GA	66	1	3062	2829	2363
GA	67	1	2497	5993	3567
GA	68	1	407	1673	984
GA	69	1	566	533	447
GA	70	1	357	1760	849
GA	71	1	97	754	425
GA	72	1	639	906	739
GA	73	1	220	1068	640
GA	74	1	17	288	163
GA	75	1	46	478	255
GA	76	1	8	141	80
GA	77	1	15	144	88
GA	78	1	15	268	151
GA	79	1	51	878	497
GA	80	1	28	475	325
GA	81	1	235	785	580
GA	82	1	3269	1651	1900
GA	83	1	354	2611	1382
GA	84	1	45	244	204
GA	85	1	124	876	467
GA	86	1	15	260	177
GA	87	1	787	3840	1804
GA	88	1	73	254	218
GA	89	1	65	288	217
GA	90	1	43	229	192
GA	91	1	231	2308	1594
GA	92	1	139	1117	790

GA	93	1	134	725	608
GA	94	1	114	616	516
GA	95	1	20	113	90
GA	96	1	25	130	110
GA	97	1	28	153	128
GA	98	1	58	18	25
GA	100	1	104	931	662
GA	101	1	4244	7030	4522
GA	102	1	5	93	53
GA	103	1	5	25	22
GA	104	1	113	588	493
GA	105	1	117	608	510
GA	106	1	109	590	495
GA	107	1	184	954	800
GA	108	1	1294	409	687
GA	109	1	124	739	525
GA	110	1	26	138	116
GA	111	1	4	83	47
GA	112	1	78	397	327
GA	113	1	113	658	418
GA	114	1	93	626	485
GA	115	1	9	48	40
GA	116	1	113	531	278
GA	117	1	4908	2156	2567
GA	118	1	6313	7228	5731
GA	119	1	1870	7487	4203
GA	120	1	72	295	246
GA	121	1	1641	3607	2300
GA	122	1	3071	845	1536
GA	123	1	120	492	411
GA	124	1	102	418	349
GA	125	1	77	317	264
GA	126	1	74	303	253
GA	127	1	92	376	314
GA	128	1	93	384	321
GA	129	1	132	539	450
GA	130	1	74	302	252
GA	131	1	76	310	259
GA	132	1	6841	2362	3646
GA	133	1	3633	1000	1817
GA	134	1	29	511	433
GA	135	1	41	710	602
GA	136	1	91	727	625
GA	137	1	20	335	284
GA	138	1	33	563	478
GA	139	1	21	363	308
GA	140	1	271	454	428
GA	141	1	69	494	305
GA	142	1	83	25	36
GA	143	1	208	64	91
GA	144	1	880	1424	847
GA	145	1	845	4190	2199
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GA	151	1	101	728	537
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GA	162	1	441	2731	1421
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GA	164	1	690	325	448
GA	165	1	63	258	216
GA	166	1	1615	7160	3313
GA	167	1	878	2484	1280
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GA	176	1	57	232	194
GA	177	1	796	424	455
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GA	194	1	50	204	171
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GA	207	1	43	173	145
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GA	215	1	514	1537	877

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GA	341	1	73	301	251

Final General Plan - Traffic Study Addendum

**Robert Kahn, John Kain
& Associates, Inc.**

Transportation Planning • Traffic/Acoustical Engineering

October 4, 1993

Mr. Henry J. Hohenstein
CITY OF INDIO
P.O. Drawer 1788
100 Civic Center Mall
Indio, CA 92202

Subject: City of Indio Draft Circulation Plan - Revised

Dear Mr. Hohenstein:

The purpose of this letter is to describe additional revisions to the recommended general plan circulation system as a result of the City review process of the Draft Circulation Plan. The latest revised Draft City of Indio Circulation Plan is shown in Exhibit B.

To better conform with City of La Quinta roadway plans along jurisdiction boundaries, segments of Jefferson Street (south of 48th Avenue) and 52nd Avenue (west of Jefferson Street) are recommended as Augmented Major cross-sections. Madison Street south of 52nd Avenue and 52nd Avenue east of Madison Street are recommended as Arterial cross-sections.

As discussed at earlier sessions, we are recommending the addition of an alternative roadway classification/cross-section for the Augmented Major classification. The Augmented Major classification is proposed with variants Type A and Type B to better accommodate available right-of-way width with similar daily roadway capacity. Type B would eliminate the parking/bike lane adjacent to the curb to permit adequate travel lane width.

Highway 111 between the west study boundary and Monroe Street is proposed as an Augmented Major (Type A). Madison Street between Fred Waring Drive and Miles Avenue, and between Highway 111 and 50th Avenue is proposed as an Augmented Major (Type B), and as a Collector between Miles Avenue and Highway 111. East Valley Parkway is proposed as an Arterial classification from Madison Street to Dillon Road. Varner Road is proposed as an Augmented Arterial between Madison Street and Jackson Street.

Fred Waring Drive east of Jefferson Street is proposed as an Augmented Major (Type B).


Mr. Henry J. Hohenstein
CITY OF INDIO
October 4, 1993
Page 2

In general, use of the Type B version of Augmented Major will restrict bike lane opportunities along segments of Madison Street, 48th Avenue and Fred Waring Drive, as well as Route 111 east of Monroe Street. Ultimate cross-sections for other General Plan roadways can accommodate on-street bike lanes.

Our model runs with these changes will be completed today and presented on Wednesday. If you should have any questions regarding these proposed changes, please do not hesitate to call at (714) 474-0809.

Sincerely,

ROBERT KAHN, JOHN KAIN & ASSOCIATES, INC.


John Kain, AICP
Principal

JK:LR:nad/3572

JN:197-90-001

xc: Richard Rust, CHAMBERS GROUP

TABLE 1

GENERAL PLAN LAND USE SUMMARY BY CATEGORY

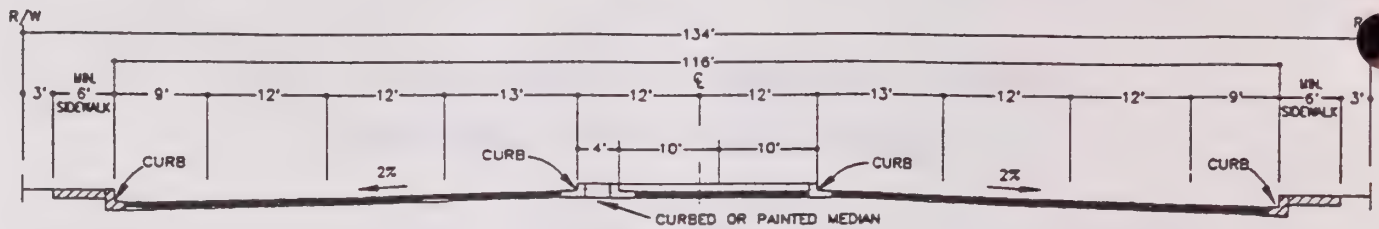
(WITHIN GENERAL PLAN STUDY AREA)

REVISED 10/4/93

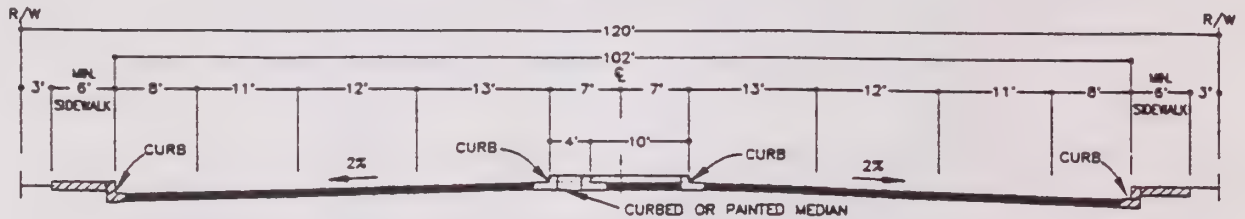
LAND USE CODE	DESCRIPTION	UNITS	QUANTITY
<u>Residential</u>			
1	HE (0.1 - 0.4 DU/Acre)	DU	80.0
2	CE/EE (0.4 - 2 DU/Acre)	DU	11,505.0
3	RL (2 - 5 DU/Acre)	DU	23,728.0
4	RM (5 - 8 DU/Acre)	DU	6,130.0
6	High Density	DU	4,980.0
7	Retirement	DU	4,138.0
8	Resort	DU	2,008.0
<u>Commercial</u>			
10	Convenience Commercial	Acres	20.5
11	Neighborhood Commercial (8 - 15 AC)	Acres	85.2
12	Community Commercial (16-40 AC)	Acres	620.7
13	Regional Commercial (>40 AC)	Acres	200.0
16	Commercial Office	Acres	102.8
19	Service/Downtown	Acres	102.7
<u>Industrial</u>			
20	Business Park	Acres	430.9
21	Industrial Park	Acres	298.8
22	Manufacturing	Acres	219.8
<u>Public/Institutional</u>			
30	High School/Public Schools	Acres	248.8
33	Government Offices/Public	Acres	151.2
34	Church/Quasi-Public	Acres	171.4
<u>Recreational/Open Space</u>			
40	Community Park	Acres	56.5
41	Golf Course	Acres	67.3
42	Regional Park/Public	Acres	49.4
43	Agriculture/Mining	Acres	1,057.5
50	Mixed Use	Acres	646.1

JK:kgd/3583
JN:197-90-001
October 6, 1993

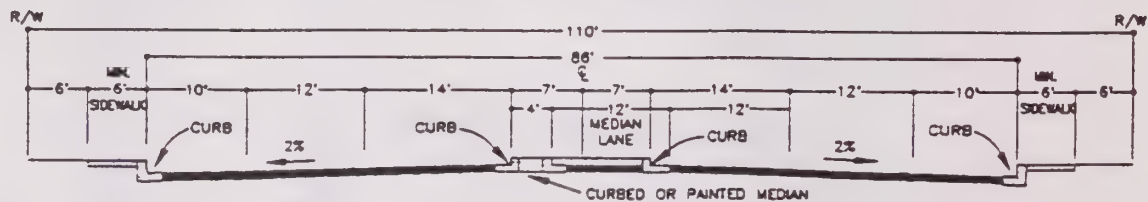
CITY OF INDIO PROPOSED ROADWAY CROSS-SECTIONS



AUGMENTED ARTERIAL



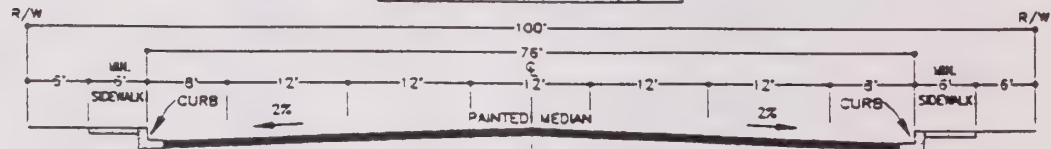
AUGMENTED MAJOR (A)



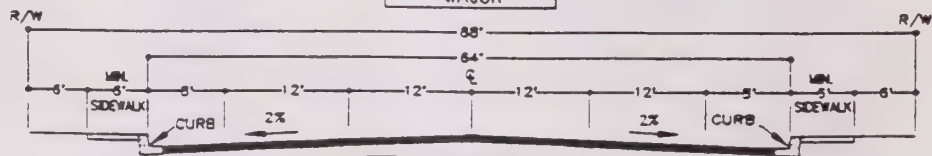
ARTERIAL



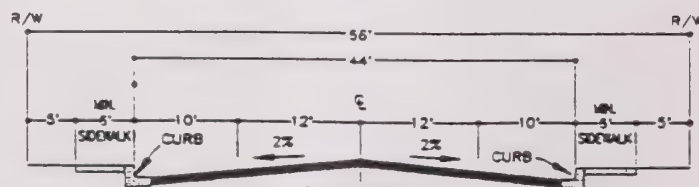
AUGMENTED MAJOR (B)



MAJOR



SECONDARY



COLLECTOR

INDIO GENERAL PLAN PROGRAM
City of Indio, California

Robert Kahn, John Kain
& Associates, Inc.

POST 2015 AVERAGE DAILY TRAFFIC (ADT) WITH MADISON ST. I-10 OVERCROSSING OCTOBER 4, 1993

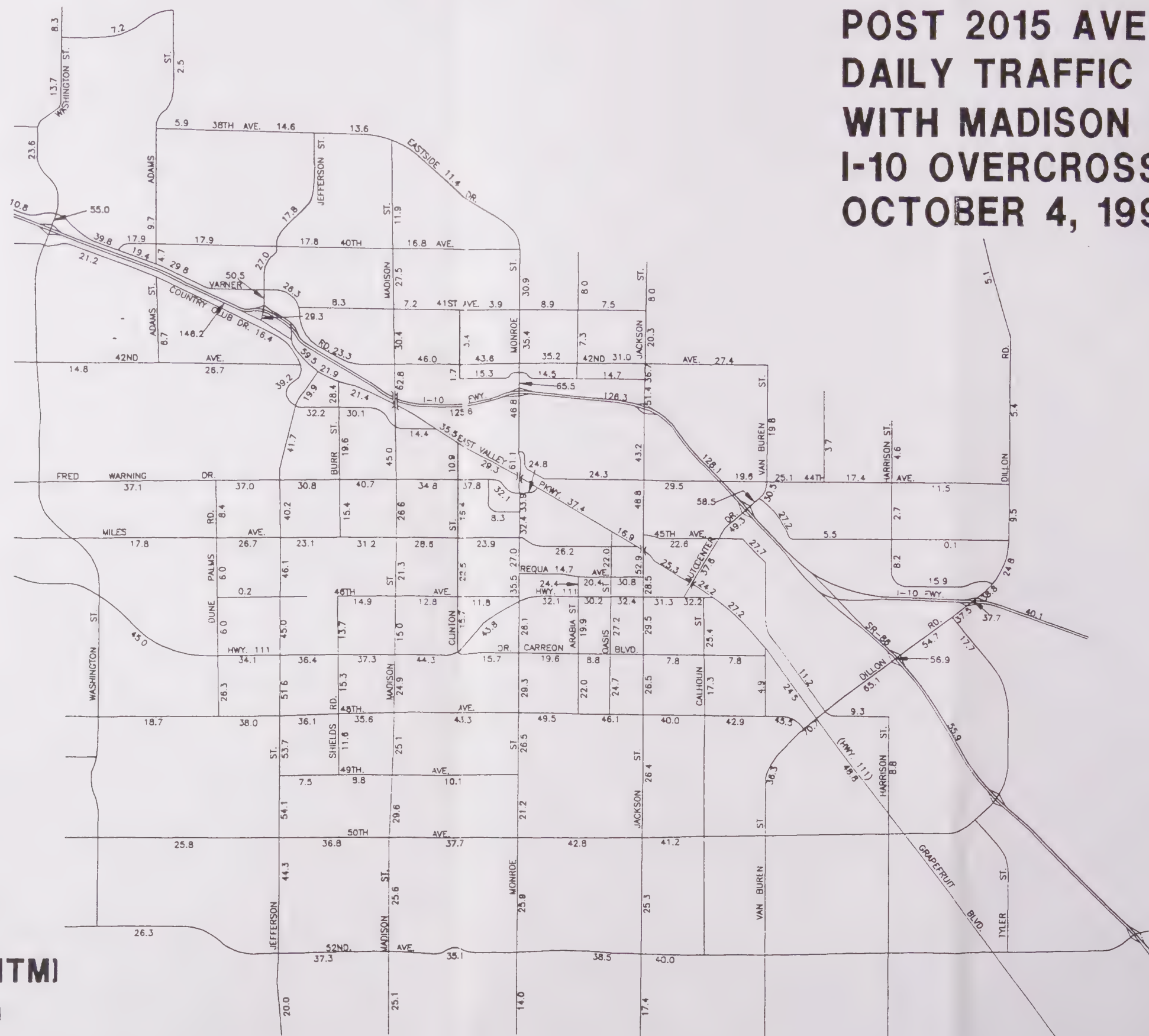
LEGEND:

18.7 = AVERAGE DAILY TRAFFIC (1000'S)



(IN FEET)

1 INCH = 6,000 FT.
(APPROXIMATE)

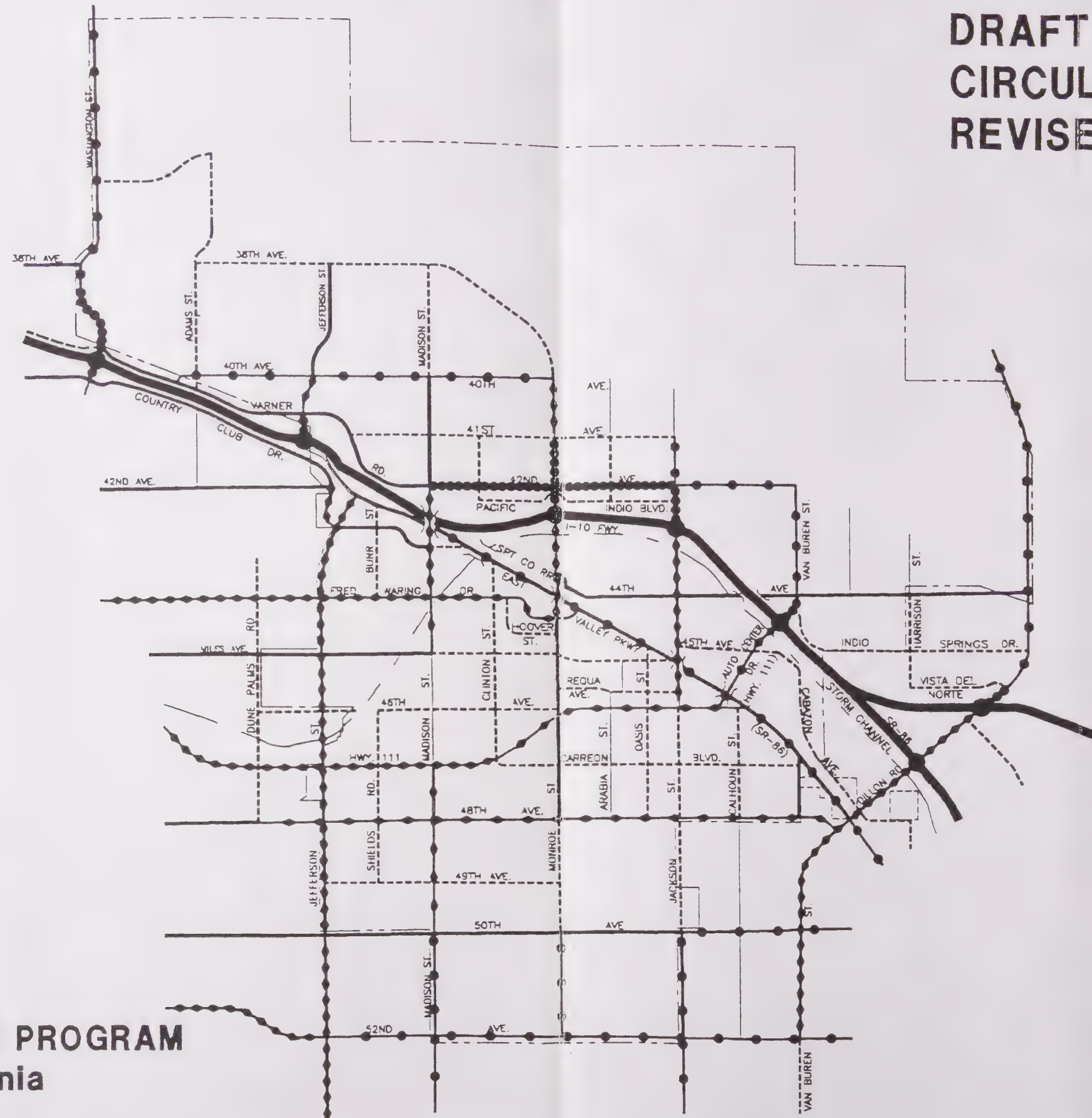


INDIO TRAFFIC MODEL (ITM)
City of Indio, California

EXHIBIT A

Robert Kahn, John Kain
& Associates, Inc.

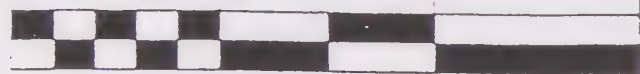
DRAFT CITY OF INDIO CIRCULATION PLAN REVISED 10-7-93



LEGEND:

- = FREEWAY
- = AUGMENTED ARTERIAL
- = AUGMENTED MAJOR (A)
- = AUGMENTED MAJOR (B)
- = ARTERIAL
- = MAJOR
- = SECONDARY
- = COLLECTOR
- = STUDY AREA BOUNDARY

6,000 0 6,000 12,000



(IN FEET)

1 INCH = 6,000 FT.
(APPROXIMATE)



INDIO GENERAL PLAN PROGRAM
City of Indio, California

POST 2015 VOLUME TO CAPACITY RATIOS WITH MADISON ST. I-10 OVERCROSSING OCTOBER 4, 1993

LEGEND:

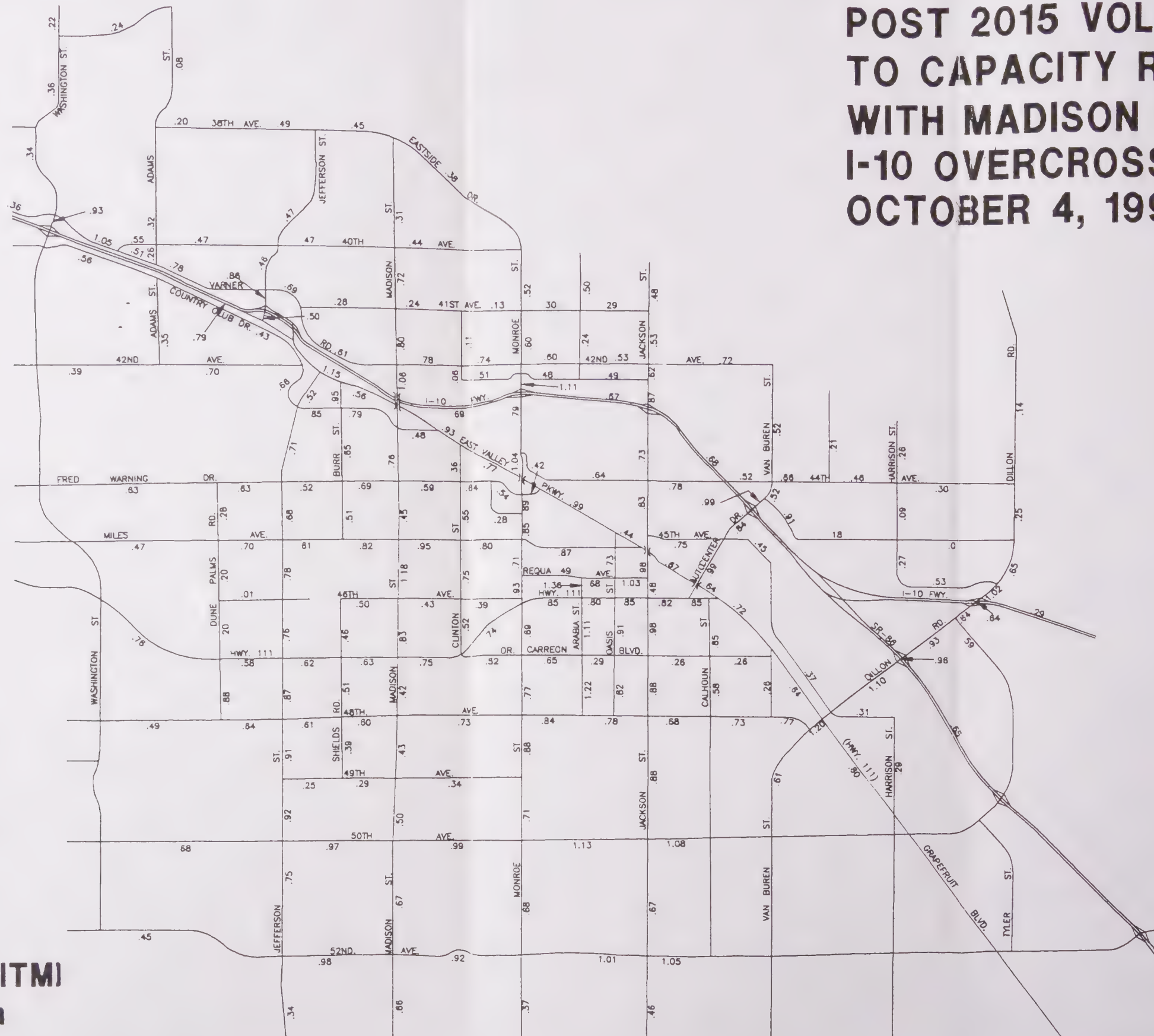
.76 = VOLUME TO CAPACITY RATIO



(IN FEET)

1 INCH = 6,000 FT.

(APPROXIMATE)



INDIO TRAFFIC MODEL (ITM)
City of Indio, California

EXHIBIT C

Robert Kahn, John Kain
& Associates, Inc.

APPENDIX C

ECONOMIC DEVELOPMENT

APPENDIX C - ECONOMIC DEVELOPMENT

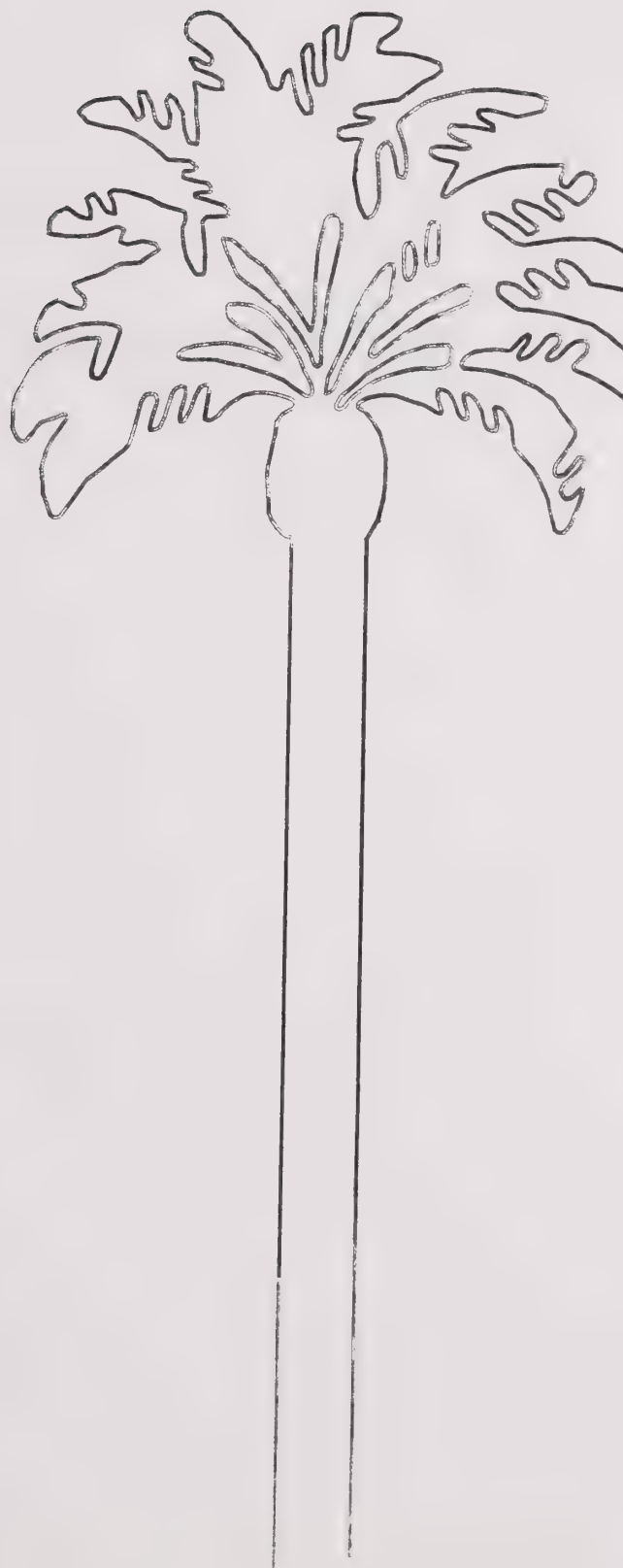
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Fiscal Impact Analysis - City of Indio General Plan Update

CITY OF INDIO

General Plan Economic Study



DRAFT

MARCH 1992

DRAFT

**CITY OF INDIO
GENERAL PLAN PROGRAM**

GENERAL PLAN ECONOMIC STUDY

Prepared for:

City of Indio
100 Civic Center Mall
P.O. Drawer 1788
Indio, California 92202
(619) 342-6500

Prepared by:

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March 1992

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CHAPTER 1

INTRODUCTION

1.1 Purpose and Objectives

Indio is currently in the process of a major city-wide General Plan update and development of a policy plan to guide the growth of the Shadow Hills area north of Interstate 10. In order to enhance the success of these efforts, the preparation of an economic study and the development of a comprehensive economic development strategy was viewed as essential.

This study presents the results of an economic analysis of the Coachella Valley, the East Valley, and Indio to better understand the economic and demographic forces that are shaping the region, and how Indio can plan an economic strategy to meet its employment growth goals while providing a diversity of development, employment, housing, and resort/recreational opportunities. Figure 1 shows the general boundary between the East and West Coachella Valley, as well as the location of Indio within the East Coachella Valley.

The specific objectives of the economic analysis include the following:

- To provide a current economic profile for Indio
- To evaluate the economic position of Indio in a regional context
- To focus on the key growth sectors of the local economy
- To establish a reliable projection of future market demand and development opportunities as a basis for General Plan preparation
- To assist the City in determination of land use, development policy, and economic programs to lead to balanced growth and development for Indio

1.2 Overview of Report

This chapter presents an overview of the economic analysis and economic issues related to Indio's General Plan. Chapter 2 provides a summary of the economic analysis. Chapter 3 presents the job growth projections in greater detail, focusing on industry growth trends in the East Coachella Valley and Indio. Chapter 4 presents job-based projections of non-residential land required to accommodate the economic expansion in Indio. Chapter 5 presents a detailed analysis of Indio's current retail conditions and projections for future retail land requirements based on market growth within Indio's trade area. Chapter 6 presents an analysis of Indio's historic and projected

FIGURE 1
CITY OF INDIO GENERAL PLAN PROGRAM
DEFINITION OF MARKET AREAS



participation in the hotel market, including the potential for Indio to enter the resort hotel market. Chapter 7 provides an analysis of the resulting relationship between jobs and housing in Indio under the range of projections presented in this report.

1.3 Overview of the Economic Analysis

In preparing the employment projections, the entire Coachella Valley has been treated as the major economic region, with the East Coachella Valley, and Indio--located within the East Valley--competing for a share of the regional growth. Further, the projections have been prepared as a range, with the latest adopted SCAG projections serving as the baseline trend, and an enhanced projection serving as the more dynamic scenario for Indio under the assumptions of a diversifying manufacturing and service economy, strengthening of the civic center area and the Highway 111 corridor, strong residential and commercial growth in the Shadow Hills area, and the emergence of a resort hotel sector within Indio.

While the Coachella Valley increased significantly during the 1980s, the economy has remained concentrated in the retailing, services and lodging/resort sectors. Further, much of this growth has occurred outside of the East Coachella Valley area, which has captured only about 8.5 percent of the job growth from 1983 to 1992. Historically, manufacturing activities have not constituted major growth sectors, with only about 3 percent of the Coachella Valley's employment growth occurring in manufacturing over the 1983 to 1992 period.

Indio has traditionally been the economic center of the East Coachella Valley. However, it has largely served the low and moderate income housing market needs, and has not fully participated in the substantial lodging/resort growth occurring in the neighboring communities to the west. While Indio has maintained a positive image as a balanced community with an economic base serving a broad range of market demands, Indio must enhance its full economic development potential through an understanding of the current market opportunities and the development of a strategy to realize those opportunities.

Indio has a number of opportunities, including the following:

- The potential to broaden the mix of housing and regional commercial development offered by the Interstate 10 corridor and the Shadow Hills area

- The ability to strengthen and diversify its manufacturing and commercial base provided by economic incentives from the newly created Coachella Valley Enterprise Zone Authority and potential development of the Thermal Airport
- The opportunity to provide resort lodging facilities near the polo fields, in Shadow Hills, and in other areas
- The revitalization of retailers and automobile dealerships along the Highway 111 Corridor
- The opportunity to strengthen its civic, cultural, and government center

By responding to all these and other opportunities, Indio can capture a larger share of the economic growth projected to occur in the 1990s and into the 21st century. The enhanced economic projections presented in this report assume that such a strategy can be realized by Indio, while the baseline trend projection continues current patterns.

The discussion of key issues focuses on specific subareas within the City of Indio, including Shadow Hills, and components of an economic strategy that would serve to strengthen and diversify the local economy.

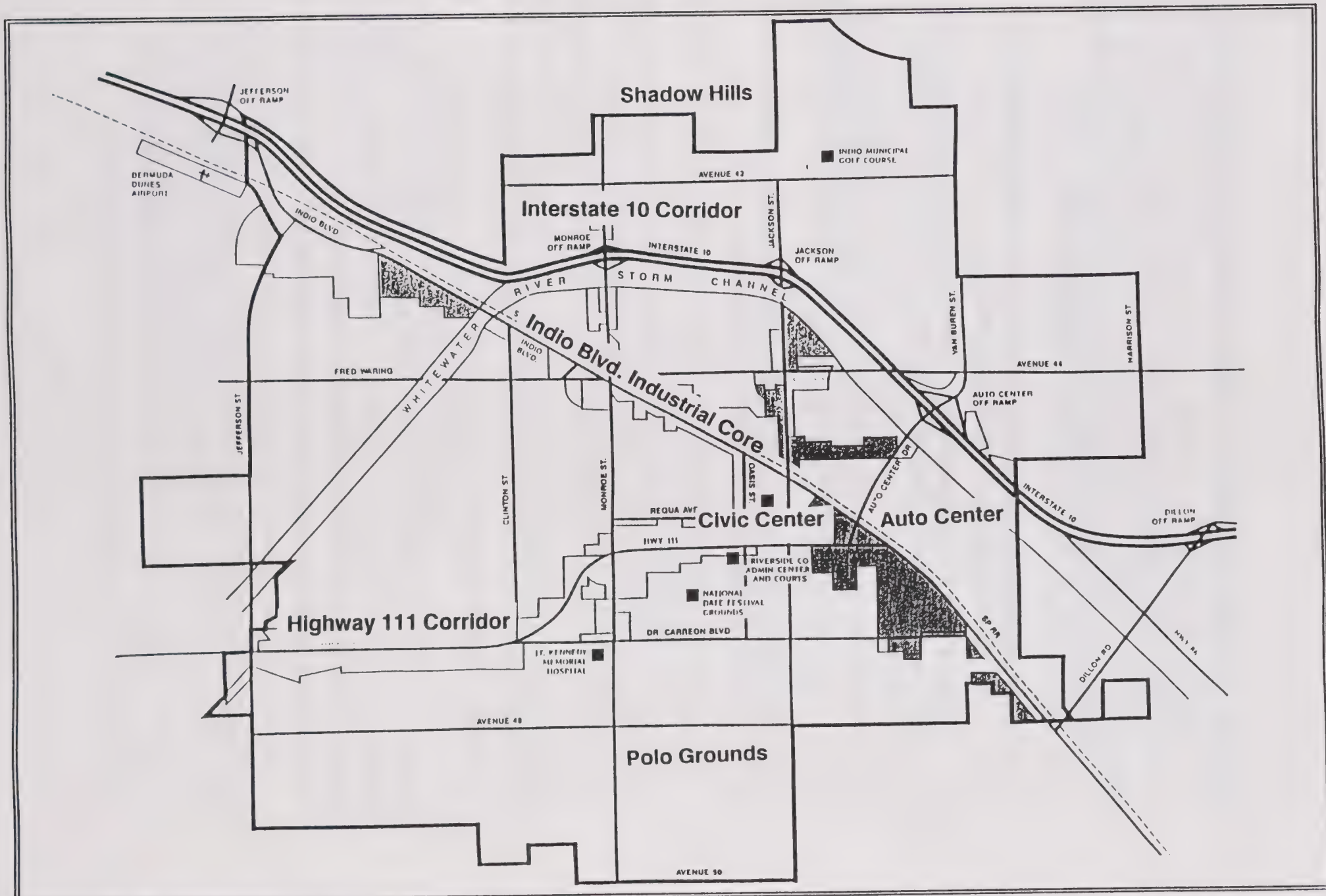
1.4 Economic Analysis Areas And Economic Issues

The economic analysis highlights growth trends that will effect Indio's economic future. However, to fully participate in capturing an increasing share of growth and to strengthen and diversify the local economy, Indio needs to develop a comprehensive economic strategy as part of the General Plan process that focuses on different subareas of the City as shown in Figure 2. Proposed components of that strategy and related key issues are discussed below:

Shadow Hills. Major development is proposed or anticipated in the area just north of the City above Interstate 10 generally called Shadow Hills. Currently, this area is primarily used for agricultural activities. Key issues related to this area are:

- Development of residential units providing a mix of housing opportunities and prices meeting the needs of a changing labor force, and also offering more seasonal and retirement home choices.
- Development of support community and neighborhood retail centers.
- Providing recreational opportunities, such as golf courses, tennis courts, and recreational centers that enhance the area's attractiveness.
- Development of destination resort potential with lodging and recreational amenities.

FIGURE 2
CITY OF INDIO GENERAL PLAN PROGRAM
CITY OF INDIO ECONOMIC ANALYSIS AREAS



Interstate 10 Corridor. The Interstate 10 corridor, a portion of which runs through Indio, is attracting major attention by a number of the communities in the Coachella Valley because of its attractiveness for retailing and business activities. Indio has a good opportunity to enhance its competitive position along this corridor and is already processing the Pacific Indio proposal at the Monroe off-ramp for regional retailing and mixed use development. Key issues related to this area include:

- Development of major regional retail and mixed use center at the Monroe off-ramp as part of the Pacific Indio project.
- Encourage the development of other intersections along the Interstate 10 through appropriate land use designations and improvements to accessibility and circulation.
- Improvements to the signage near and along Auto Center Drive and the Interstate 10 in order to improve the market draw to the auto uses along Indio Blvd. and the eastern end of Highway 111.
- Development of office/business park uses, and related business oriented lodging facilities, also serving the through traveler.
- In the long term, higher density condominiums, townhouses, and apartments may be appropriate.

Indio Boulevard Industrial Core. Indio Boulevard, which runs from the Interstate 10 into Indio across Highway 111 and parallels the Southern Pacific railroad tracks, has had both industrial, railroad oriented activities, motel, and long distance transportation activities concentrated along this corridor. Also, in the near future, the State Route 86 designation will be abandoned when a bypass is constructed to the Interstate 10 through Coachella. Key issues related to this corridor are:

- Revitalization of the existing industrial and railroad oriented activities, and encouragement of new industrial/manufacturing uses.
- Use of the Coachella Valley Enterprise Zone Authority (CVEZA) to attract industries that will benefit from Indio's labor pool.
- Infrastructure improvements to improve the traffic flow and attractiveness of the area.

Civic Center. Like many older city centers, Indio has retained governmental uses, with the concentration of both city, county, and state government facilities, but many newer business developments have taken place outside the city center along more accessible routes. Current interest has been expressed by the College of the Desert to locate a adjunct facility in downtown Indio. Key issues related to this area are:

- Strengthen the governmental nature of the civic center area, allowing for these facilities to expand.
- Encourage the College of the Desert to locate their temporary facility in the downtown, and work with the college to find a permanent site in Indio.
- Revitalize the downtown commercial core in parallel with the growing needs of the current and future residences, college students, and governmental employees.
- Use CVEZA to assist businesses in the commercial core, and encourage the college to develop programs that strengthen the skills of the local labor force.

Highway 111 Corridor. The Highway 111 corridor has historically had the major concentration of commercial businesses, including the Indio Fashion Mall, the auto dealers, and other community serving establishments. With significant interest shifting to the Interstate 10 corridor, uses in this corridor need to be strengthened, and focused to primarily serve the community. Key issues related to this corridor are:

- The timely completion of the Indio Fashion Mall within the available window of opportunity; or, the adaptive reuse of the Fashion Mall site to another market orientation.
- The provision of design, economic and other incentives for auto dealers to remain on the eastern segment of the Highway 111 corridor.
- Strengthen the existing businesses along the corridor, particularly the auto dealers and major retailers, through the use of revitalization and CVEZA incentives.
- Work closely with existing businesses to identify their current needs in order to retain them within the City of Indio.
- Facilitate infrastructure improvements along Highway 111 including accessibility, facade, streetscapes, and signage

South Indio. Recently the City of Indio annexed an area into South Indio which contains a large number of polo fields, and interest has been expressed by some of the landowners in developing resort lodging facilities. Indio has historically not participated in the resort lodging market within the Coachella Valley, and this may present a unique opportunity which may encourage related support land uses. Key issues related to this area are:

- Encourage and assist the development of resort lodging and related support facilities and activities in the Polo Fields area.
- Continue master planned residential development in this area.

- As Indio starts to create an identity as a destination resort area, build on this momentum in other part of the City such as Shadow Hills or the western portion of Indio.

In summary, this discussion has focused on highlighting key economic issues facing Indio. As the general plan develops, there will need to be further discussion, refinement, and modification of these issues as they are structured into a comprehensive economic development strategy that enables Indio to strengthen and diversify its economy.

CHAPTER 2

SUMMARY OF ECONOMIC STUDY

This chapter summarizes the findings of the economic analysis, and the need for a comprehensive economic development strategy. Where applicable, specific segments of the economic development strategy pertaining to Shadow Hills are highlighted.

Two major events which will influence economic growth in the East Coachella Valley are the adoption of the Coachella Valley Enterprise Zone (CVEZ) and expansion plans for the Thermal Airport. In brief, these two programs are summarized as follows:

1. Coachella Valley Enterprise Zone: The establishment of a 27, 080 acre enterprise zone as joint powers authority between the cities of Coachella and Indio and the County of Riverside, covering major portions of prime developable real estate located in and around the cities of Indio and Coachella. The Coachella Valley Enterprise Zone Authority (CVEZA) offers a range of State tax incentives, including employer hiring credit, employee training programs, tax credit for new equipment purchases, business expense deductions, non-taxable investment interest, individual workers credit, and sales development program incentives. Also included are local incentives, including fast track permitting, waiver of selected processing fees, site selection incentives, and other inducements, such as reduced land costs through Redevelopment Agency authority, inventory of available sites, and municipal financing to provide infrastructure.
2. Thermal Airport Expansion: The Airport Master Plan addresses the needs of the airport over the next twenty years and devaluates its role within the region, as well as its economic impacts. The Thermal Airport, located south of Coachella, currently has two runways, a system of taxi ways and a small terminal area. A majority of the existing airport facilities were constructed by the U.S. Army during World War II and have seen little improvement since that time. Facilities considered vital to the airport's expansion are the expansion of the runways to accommodate a wider range of business jet aircraft, and service facilities. This will include a major extension of the main runway to 8,500 feet, and strengthening to accommodate aircraft weighing up to 60,000 pounds.

2.1 Employment Trends and Projections

Table 2-1 provides a summary of historic and projected employment by industry category for the Coachella Valley, the East Coachella Valley and the City of Indio. Two scenarios are shown. The SCAG-based scenario can be considered a low projection, and does not consider the potential impact of the Coachella Valley Enterprise Zone and the Thermal Airport. The enhanced projection can be considered a high projection, and

takes into account the effect of the enterprise zone and the airport on Indio's economy. Together, these two projections provide high and low parameters for economic development planning.

Employment Growth

As shown in Table 2-1, employment in the Coachella Valley is projected to increase from about 88,930 jobs in 1992 to about 171,300 jobs in 2020 under both scenarios. In the East Coachella Valley, employment is projected to increase from 18,300 estimated jobs in 1992 to about 53,300 jobs in 2020 under the SCAG-based scenario. Under the enhanced scenario, employment is projected to increase slightly more, to about 55,800 jobs in the East Coachella Valley.

Indio's employment is projected to increase from 12,370 jobs in 1992 to about 20,200 jobs under the SCAG-based scenario, for a net increase of about 7,830 jobs. Under the enhanced scenario, Indio's employment is projected to increase to 32,200, an addition of about 19,830 jobs--more than double the SCAG-based increase. The enhanced projection shows significantly higher employment growth than does the SCAG-based projection.

The Composition of Employment Growth

In the Coachella Valley as a whole, local-serving employment is projected to increase by about 37,800 new jobs--about 45 percent of all new jobs projected. In the East Coachella Valley, economic growth is projected to be more balanced, with about 38 percent in local-serving industry, about 19 percent in basic non-manufacturing industry, 21 percent in basic manufacturing, and about 22 percent either self-employed or in government.

Under the enhanced projection, Indio's employment growth consists of about 42 percent local-serving, 16 percent basic non-manufacturing, 18 percent basic manufacturing and 23 percent self-employed and government. Because of the enterprise zone, projections for manufacturing and other basic industries have been enhanced in the East Coachella Valley and Indio. In addition, the enhanced scenario assumes a continued diversification of Indio's economic base and improved competitiveness. This scenario does not assume status quo; rather, it projects what is possible under a coordinated economic development strategy.

TABLE 2-1
CITY OF INDIO GENERAL PLAN PROGRAM
EMPLOYMENT PROJECTIONS

	Historical		SCAG-Based Projection \1			Enhanced Projection		
	1983	1992	2000	2010	2020	2000	2010	2020
Coachella Valley								
Basic Manufacturing	1,479	2,319	4,800	10,700	14,000	4,800	10,700	14,000
Basic Non-Manufacturing	11,153	14,745	18,300	24,900	27,800	18,300	24,900	27,800
Local Serving	31,120	50,512	62,900	80,400	88,300	62,900	80,400	88,300
Government and Self-Employed	<u>13,826</u>	<u>21,354</u>	<u>27,200</u>	<u>36,700</u>	<u>41,100</u>	<u>27,200</u>	<u>36,700</u>	<u>41,100</u>
Total	57,578	88,930	113,100	152,800	171,300	113,100	152,800	171,300
East Coachella Valley								
Basic Manufacturing	620	1,198	2,500	5,700	8,800	2,700	6,300	8,200
Basic Non-Manufacturing	3,838	2,615	3,800	6,500	8,900	4,200	7,100	8,400
Local Serving	7,414	10,085	13,800	19,500	23,400	15,300	21,500	25,800
Government and Self-Employed	<u>3,752</u>	<u>4,392</u>	<u>6,300</u>	<u>10,000</u>	<u>12,200</u>	<u>7,000</u>	<u>11,000</u>	<u>13,400</u>
Total	15,624	18,289	26,400	41,700	53,300	29,200	45,900	55,800
City of Indio								
Basic Manufacturing	312	529	1,000	2,200	3,100	1,400	3,200	4,100
Basic Non-Manufacturing	1,551	1,037	1,400	2,400	3,100	1,900	3,500	4,200
Local Serving	5,934	7,920	8,500	9,400	9,300	11,100	14,200	16,300
Government and Self-Employed	<u>2,370</u>	<u>2,884</u>	<u>3,300</u>	<u>4,200</u>	<u>4,700</u>	<u>4,400</u>	<u>6,400</u>	<u>7,500</u>
Total	10,167	12,370	14,300	18,200	20,200	18,800	27,300	32,200

Source: Stanley R. Hoffman Associates, Inc.

Totals may not add due to rounding

\1 Based on SCAG 1987 projection of 2010 population, employment and housing.

Existing and Projected Employment Structure of Indio

Table 2-2 provides more detail about existing and projected employment by industry in Indio based on the enhanced projection presented in Table 2-1. In 1983, the local-serving industry sector comprised about 58 percent of total employment in the City. By 1992, this share is estimated to have increased to about 64 percent of total employment. The local-serving sector is driven primarily by retail, as well as construction and other local services. Basic manufacturing--which contains no high-technology manufacturing--has increased its share from about 3.1 percent in 1983 to about 4.3 percent in 1992. Basic non-manufacturing has decreased from about 15.3 percent in 1983 to 8.4 percent in 1992. This is due primarily to the shrinking agricultural sector in the East Coachella Valley.

By 2020, the basic manufacturing sector in Indio is projected to increase its share to about 12.8 percent. The basic non-manufacturing sector is also projected to increase its share from 8.4 percent in 1992 to 13.1 percent in 2020. As these two sectors expand their shares, the local-serving sector is projected to decline from its 1992 share of 64 percent to about 50.7 percent in 2020.

The increase in Indio's employment and the shifts in Indio's economic composition are based on two main assumptions. First, the East Coachella Valley is perceived as being well-positioned to capture a significant share of the valley's growth in non-tourism industries. By 2020, about one-third of all jobs in the valley are projected to be in the East Valley. The second assumption is that Indio will capture over half of the employment in the East Valley based on its central location, the new development in Shadow Hills, the eventual development of the polo grounds and the incentives offered under the Coachella Valley Enterprise Zone and the redevelopment agency.

2.2 Projected Demand for Non-Residential Acreage

Table 2-3 presents a summary of non-residential acreage demand for the City of Indio, based on the employment projections, retail projection and hotel projection. The acreage demand is presented for the enhanced scenario only. This represents net developable acreage, and does not include acreage for public infrastructure, public and quasi-public facilities, parks, schools and open space.

The greatest demand is projected to occur during the period from 2000 to 2010, with demand for about 244 acres of land. The bulk of this demand, about 49.2 percent, is projected for industrial and business park uses. During the period from 1992 to 2000,

TABLE 2-2
CITY OF INDIO GENERAL PLAN PROGRAM
CITY OF INDIO: EMPLOYMENT TREND AND PROJECTION

Industry	Employment			Share of Total Employment		
	1983	1992	2020	1983	1992	2020
Basic Manufacturing						
High Technology Manufacturing	0	0	15	0.0%	0.0%	0.0%
Diversified Manufacturing	<u>312</u>	<u>528</u>	<u>4,119</u>	<u>3.1%</u>	<u>4.3%</u>	<u>12.8%</u>
Subtotal - Basic Manufacturing	312	529	4,134	3.1%	4.3%	12.8%
Basic Non-Manufacturing						
Agriculture and Mining	718	283	133	7.1%	2.3%	0.4%
Long Distance Transportation	91	40	358	0.9%	0.3%	1.1%
Wholesale Trade -durable	124	203	460	1.2%	1.6%	1.4%
Hotels and Motels	311	168	1,496	3.1%	1.4%	4.6%
Computer Services	6	6	185	0.1%	0.0%	0.6%
Diversified Basic Services	<u>301</u>	<u>338</u>	<u>1,594</u>	<u>3.0%</u>	<u>2.7%</u>	<u>4.9%</u>
Subtotal - Basic Non-Manufacturing	1,551	1,037	4,226	15.3%	8.4%	13.1%
Local Serving						
Construction	537	1,608	2,757	5.3%	13.0%	8.6%
Local TCU	431	485	1,183	4.2%	3.9%	3.7%
Wholesale Trade - Non-Durable	173	400	1,340	1.7%	3.2%	4.2%
Retail Trade	3,238	3,770	7,530	31.8%	30.5%	23.4%
F.I.R.E.	284	307	1,343	2.8%	2.5%	4.2%
Local Services	<u>1,271</u>	<u>1,350</u>	<u>2,197</u>	<u>12.5%</u>	<u>10.9%</u>	<u>6.8%</u>
Subtotal - Local Serving	5,934	7,920	16,350	58.4%	64.0%	50.7%
Self-employed	624	759	1,977	6.1%	6.1%	6.1%
Government	1,747	2,125	5,535	17.2%	17.2%	17.2%
Total	10,167	12,370	32,222	100.0%	100.0%	100.0%

Source: Stanley R. Hoffman Associates, Inc.
County Business Patterns

demand is projected for about 186 acres, split 39.8 percent for industrial/business park, 12.9 percent for office, 41.9 percent for retail, and 5.4 percent for hotel. During the period from 2010 to 2020, demand is projected for about 141 acres, split 48.9 percent for industrial/business park, 14.2 percent for office, 32.6 percent for retail and 4.3 percent for hotel. Total demand for non-residential acreage is projected at 570 acres, split 46.0 percent industrial/business park, 13.7 percent office, 34.6 percent retail, and 5.8 percent hotel.

The projections are shown based on projected 2020 demand. However, the City may want to reserve more land, assuming other related infrastructure improvements, and to retain flexibility and to provide for larger firms that may seek sites with long-range expansion potential.

Table 2-3
City of Indio General Plan Program
Projected Non-Residential Acreage Demand

Land Use Category	1992 to 2000		2000 to 2010		2010 to 2020		Total Demand	
	acres	percent	acres	percent	acres	percent	acres	percent
Industrial/ Bus. Park	74	39.8%	120	49.2%	69	48.9%	262	46.0%
Office	24	12.9%	34	13.9%	20	14.2%	78	13.7%
Retail/ Commercial	78	41.9%	73	29.9%	46	32.6%	197	34.6%
Hotel	<u>10</u>	<u>5.4%</u>	<u>17</u>	<u>7.0%</u>	<u>6</u>	<u>4.3%</u>	<u>33</u>	<u>5.8%</u>
Total	186	100.0%	244	100.0%	141	100.0%	570	100.0%

Source: Stanley R. Hoffman Associates, Inc.

2.3 Projected Requirements for Retail Space and Land

Indio has historically been the commerce center of the East Coachella Valley. Retail trade is currently the largest industry in Indio in terms of jobs; sales tax is one of the City's largest revenue sources. The diversity of retail outlets and the year-round market have given Indio one of the higher sales per capita figures in the Valley.

However, several trends are jeopardizing Indio's ability to compete for retail dollars within the valley. First, the continued annexation and development by other communities along Interstate 10 generates new forms of competition. Discount warehouse retailers and other promotional retail outlets locating in nearby resort communities are beginning to compete with Indio for local purchasing power. Second, Indio has lost several major retailers recently, including auto dealers, and is currently trying to revive the Indio Fashion Mall. The declining attractiveness of Indio's retail sector has led to increased

leakage to surrounding communities with newer centers. Given the increasing competition and Indio's decreasing ability to compete, a comprehensive retail strategy is needed to increase the attractiveness of Indio as a retail center.

Part of that strategy can be realized by planning for new retail development that can increase Indio's competitiveness, as well as revitalizing and strengthening existing retail establishments. A retail demand analysis was conducted to determine the potential for new retail development in Indio based on permanent households, seasonal households, visitors and Indio's emerging resort sector. A major portion of the projected regional retail demand can be satisfied along the Interstate 10 corridor, adjacent to the Shadow Hills area. Table 2-4 shows the projected demand for new regional, community and neighborhood retail space:

TABLE 2-4
CITY OF INDIO GENERAL PLAN
PROJECTED DEMAND FOR RETAIL SPACE AT BUILD OUT

	Regional Centers	Community Centers	Neighborhood Centers	Total Retail Space
Supportable GLA at Build Out	900,000	1,700,000	1,800,000	4,400,000
Less: Existing GLA	<u>218,000</u>	<u>941,000</u>	<u>932,000</u>	<u>2,091,000</u>
Equals: Net Increase	682,000	759,000	868,000	2,309,000
Allocation by Center Type	29.5%	32.9%	37.6%	100.0%

*Source: Stanley R. Hoffman Associates, Inc.
California State Board of Equalization*

2.4 Hotel Demand Projections

To date, Indio has not participated fully in the business or resort lodging market. However, growth has been occurring slowly in the supply of motel rooms in Indio. Table 2-5 presents hotel/motel data for 1983, 1991 and projections for 2010 and 2020. As shown, Indio had 961 rooms in 1983. By 1991, this number increased to 1,246. This amounts to 285 net new hotel rooms over the eight year period, or about 36 rooms per year. In 1983, Indio had about 9.3 percent of the Coachella Valley's supply of hotel rooms. This share dropped to 7.8 percent by 1992.

Projections shown for 2010 and 2020 are based on the assumption that Indio begins to compete in the business and resort lodging market, with potential hotel development on

**TABLE 2-5
CITY OF INDIO GENERAL PLAN PROGRAM
SUMMARY OF HOTEL TREND AND PROJECTION**

Period	Coachella Valley	City of Indio	Indio's Capture of Coachella Valley Total
1983	10,294	961	9.3%
1991	15,952	1,246	7.8%
Rooms Added: 1983-1991	5,658	285	5.0%
2010	24,642	2,150	8.7%
2020	27,472	2,490	9.1%
Rooms Added: 1991-2020	11,520	1,244	10.8%

*Source: Stanley R. Hoffman Associates, Inc.
Palm Springs Convention and Visitor's Bureau
Wheeler's Desert Letter*

the polo grounds, west Indio, Shadow Hills and the Pacific Indio project. Assuming an increasing capture of the Coachella Valley lodging market, Indio is projected to add about 1,240 hotel rooms by 2020.

2.5 Housing and Population Trends and Projections

Table 2-6 contains summary information on the projection of housing units for the Coachella Valley, East Coachella Valley and Indio. Projections are shown for the enhanced scenario, assuming increased employment as discussed in Chapter 3, and are based on CVAG's projection of households from the Regional Housing Needs Analysis released in April, 1991.

Housing Units. Housing units are projected using a combination of SCAG and CVAG data, as well as employment projections and jobs/housing relationships. The City of Indio has projected to increase to 38,357 housing units by build out. This is estimated to represent about 64.3 percent of the dwelling units in the East Valley, and about 16 percent of the dwelling units in the Coachella Valley by 2020. The Coachella Valley is projected to continue to increase in permanent residency, from 62.4 percent in 1983 to 67.8 percent by 2020. Indio is projected to decrease in permanent occupancy with the addition of new amenity-related developments such as Shadow Hills, from 81.3 percent currently to 76.0 percent by 2020.

TABLE 2-6
CITY OF INDIO GENERAL PLAN PROGRAM
SUMMARY OF HOUSING TRENDS AND PROJECTIONS

	1983	1992	2010	2020
<u>Housing Units</u>				
Coachella Valley	99,250	140,510	239,900	258,520
East Coachella Valley	19,270	27,290	59,610	64,230
City of Indio	10,140	14,850	38,360	41,330
<u>Permanent Households</u>				
Coachella Valley	61,950	89,760	161,090	175,360
East Coachella Valley	15,660	22,610	49,470	51,230
City of Indio	7,820	12,080	29,920	31,413
<u>Permanent Occupancy Rate</u>				
Coachella Valley	62.4%	63.9%	67.1%	67.8%
East Coachella Valley	81.3%	82.9%	83.0%	79.8%
City of Indio	77.1%	81.3%	78.0%	76.0%

*Source: Stanley R. Hoffman Associates, Inc.
California State Department of Finance*

Population. Population for Indio is projected using a population per dwelling unit factor based on 1991 household population reported by the State Department of Finance and 1991 housing units used for permanent residence, as shown below:

1991 Total Population	38,124
Less: Population in Group Quarters	<u>822</u>
Equals: Population	37,302
Divided by: Housing Units used for Permanent Residence	<u>11,751</u>
Equals: Population per Housing Unit for Permanent Residence	3.17

Based on the projected housing units for permanent residency, Indio is projected to have a 2020 population of approximately 99,580, with about 14,880 seasonal residents.

2.6 Jobs/Housing Balance

Table 2-7 contains summary information about the projected jobs/housing balance relationships. Jobs/housing relationships are presented using two measures:

1. Jobs/Housing Unit Ratio. The jobs/housing unit measure includes all residential dwelling units, including those occupied by seasonal residents. This measure tends to artificially lower the ratio, since many seasonal residents are either retired or do not work in the Coachella Valley.

2. Jobs/Household Ratio. The jobs/household ratio compares jobs in the area to permanent, year-round households. With the exception of retired residents, this measure more accurately depicts the relationship between the supply of jobs and workers in the valley.

Coachella Valley. The Coachella Valley has increased its jobs/housing unit ratio from 0.58 to 0.66 over the period from 1983 to 1992. Using a more accurate jobs/housing measure, that of the ratio of jobs to permanent households, the Coachella Valley is projected to decrease slightly from its current ratio of 0.99 to about 0.98 as residential development continues..

East Coachella Valley. The East Coachella Valley has decreased its jobs/housing unit ratio from 0.81 to 0.67 since 1983, due to more rapid increases in the number of dwelling units. Based on the projected increases in employment, the East Valley's jobs/housing unit ratio is projected to stabilize at 0.87 as its economy diversifies. The east valley currently has a jobs/household ratio of 0.81, down from 1.00 in 1983. By 2020, the east valley is projected to have a jobs/household ratio of about 1.09, reflecting the area's transition to a more diversified employment center.

TABLE 2-7
CITY OF INDIO GENERAL PLAN PROGRAM
SUMMARY OF JOBS/HOUSING TRENDS AND PROJECTIONS

	1983	1992	2010	2020
<u>Jobs/Housing Unit Ratio</u>				
Coachella Valley	0.58	0.63	0.64	0.66
East Coachella Valley	0.81	0.67	0.77	0.87
City of Indio	1.00	0.83	0.71	0.78
<u>Jobs/Household Ratio</u>				
Coachella Valley	0.93	0.99	0.95	0.98
East Coachella Valley	1.00	0.81	0.93	1.09
City of Indio	1.30	1.02	0.91	1.03

Source: Stanley R. Hoffman Associates, Inc.

City of Indio. Under the existing SCAG trend, Indio is projected to have a jobs housing balance of 0.72 by 2010 and 0.63 by 2020. Based on the City of Indio's projection of 38,357 dwelling units by build out, and the employment projection presented in Chapter 3, Indio will have a projected jobs/housing unit ratio of 0.78 by 2020 under enhanced economic conditions. However, excluding seasonal residency, Indio's jobs/household

ratio is projected to be somewhat higher, at about 1.03 by 2020. Although Indio is projected to add a significant amount of jobs over the next three decades, the potential for a significant amount of residential development keeps the jobs/housing ratio in relative balance.

2.7 Residential Trends in the Coachella Valley

Table 2-8 presents a summary of current market conditions for residential development in the Coachella Valley. As shown, there are no attached housing developments currently selling in the Indio/Coachella market area. In terms of pricing, the single family product in the Indio/Coachella market area is the most affordable in the Coachella Valley, at a weighted average price of \$104,504. This is about 47 percent of the weighted average sales price for the whole Coachella Valley. The lower price reflects both lower land values in Indio and Coachella as well as the East Valley market's focus on permanent residency. Although there are no actively selling attached developments, the projected diversification of the East Valley economy can be expected to create demand for attached product, both for seasonal residents and for permanent residents.

**TABLE 2-8
CITY OF INDIO GENERAL PLAN PROGRAM
HOUSING MARKET PROFILE**

Market Area	Attached		Detached	
	Units Offered	Avg. Price	Units Offered	Avg. Price
Palm Springs/Cathedral City	128	\$81,950	2,632	\$129,190
Rancho Mirage	408	\$249,990	189	\$375,000
Palm Desert	1,795	\$223,460	1,061	\$332,660
Indian Wells/La Quinta	2,352	\$360,840	2,937	\$234,450
Indio/Coachella	0	NA	2,051	\$104,500
Total Coachella Valley	4,683	\$239,496	8,870	\$223,596

Source: Residential Trends: Competitive Audit, East Riverside County Market Area, December 1991

CHAPTER 3

EMPLOYMENT TRENDS AND PROJECTIONS

3.1 Methodology

Employment projections are based on a combination of historic and adjusted industry growth trends, future population and visitor growth, and industry-specific capture assumptions. Projections of employment for certain segments of the labor force, such as retail and hotel/motel employment, have been supplemented by additional analyses, as presented in Chapters 5 and 6.

In preparing the employment projections, the entire Coachella Valley has been treated as the major economic region, with East Coachella Valley, and Indio - located with the East Valley - competing for a share of the regional growth. Further, the projections have been prepared as a range, with the SCAG projections serving as the baseline trend, and an enhanced projection serving as the more dynamic scenario for Indio under the assumptions of a diversifying manufacturing and service economy, strengthening of the civic center area and the Highway 111 corridor, strong residential and commercial growth in the Shadow Hills area, and the emergence of a resort hotel sector within Indio.

Employment was first projected for the Coachella Valley, including the communities of Desert Hot Springs, Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta, Coachella, and Indio as well as unincorporated communities in the valley. Next, employment growth was projected for the East Valley, defined as Indio and Coachella, and the surrounding unincorporated communities continuing south to Imperial County and the Salton Sea. Finally, employment growth was projected for the City of Indio in order to provide guidance for the General Plan update and the Shadow Hills Interim Policy Plan.

3.2 Employment Trends

Employment trends by industry were analyzed over the period from 1983 to 1989 using special industry files by zip code from County Business Patterns, U.S. Bureau of the Census for the Coachella Valley, the East Valley area, and for the City of Indio. These trends were then updated to 1992 as the base year for the projections. Industries were grouped into detailed categories, and then further summarized by the three broad categories of basic manufacturing, basic non-manufacturing, and local-serving employment to reveal fundamental shifts in the Coachella Valley's economy over this period.

Coachella Valley Employment Trends

Table 3-1 shows employment trends for the Coachella Valley. Historically, the Coachella Valley has demonstrated an average annual employment growth rate of about 4.9 percent per year over the period from 1983 to 1992, adding about 31,354 workers over the nine year period. Most of the valley's employment growth over the last nine years--about 62 percent--has been in the local-serving industries, primarily construction, retail trade, and local services. Growth in government employment of about 5,623 and self employment of about 1,906 constituted another 24 percent of the change.

About 11.5 percent of the growth has been in basic non-manufacturing industries. Basic non-manufacturing activities consist of agriculture and mining, long distance transportation, wholesale trade of durable goods, hotels and motels, computer services and other diversified basic services. About 98 percent of this growth was in two sectors: hotel and motel, and diversified basic services employment.

Historically, manufacturing activities have not constituted major growth sectors in the Coachella Valley, with only about 3 percent of the valley's employment growth occurring in basic manufacturing over the 1983 to 1992 period. Basic manufacturing activities consist of the transformation of materials into new products primarily for non-local markets. Major industries in this group have included food and kindred products, printing and publishing, rubber and plastic products, stone, glass and clay products, and transportation equipment other than aircraft and missiles and space vehicles.

Local-serving Industry. Since 1983, local-serving industry has shown the most rapid growth, at a 5.5 percent average annual rate. Within the local-serving industries, construction experienced the most rapid growth, at 13.5 percent per year, followed by retail trade at 5.2 percent per year and local services at 4.5 percent per year. These industries grew in direct response to population and visitor growth in the Coachella Valley during the 1980's. In addition to experiencing the most rapid growth, local-serving industry also experienced the most net growth, adding about 19,400 jobs since 1983. The retail trade industry added the most jobs of all industries, increasing from about 14,200 in 1983 to 22,500 in 1992, for a net increase of about 8,300 jobs.

Basic Non-manufacturing Industry. Basic non-manufacturing industry experienced a net growth of about 3,600 jobs over the nine year period, at an annual average growth rate of 3.2 percent. Long-distance transportation and diversified basic services experienced the most rapid growth in this category, at annual average rates of 8.4 percent and 7.0 percent, respectively. Diversified basic services added about 2,300 jobs during the

TABLE 3-1
CITY OF INDIO GENERAL PLAN
EMPLOYMENT TRENDS: COACHELLA VALLEY

Industry	Coachella Valley				Distribution of Employment		
	Employment		83 - 92 Change	Annual Growth	By Industry Type		
	1983	1992			1983	1992	Growth
<u>Basic Manufacturing</u>							
High Technology Manufacturing	34	35	1	0.3%	0.00	0.00	0.00
Diversified Manufacturing	<u>1,445</u>	<u>2,283</u>	<u>838</u>	<u>5.2%</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>
Subtotal - Basic Manufacturing	1,479	2,318	839	5.1%	0.03	0.03	0.03
<u>Basic Non-Manufacturing</u>							
Agriculture and Mining	3,177	2,634	(543)	-2.1%	0.06	0.03	-0.02
Long Distance Transportation	302	625	323	8.4%	0.01	0.01	0.01
Wholesale Trade -durable	696	989	293	4.0%	0.01	0.01	0.01
Hotels and Motels	4,250	5,491	1,241	2.9%	0.07	0.06	0.04
Computer Services	24	23	(1)	-0.5%	0.00	0.00	-0.00
Diversified Basic Services	<u>2,704</u>	<u>4,984</u>	<u>2,280</u>	<u>7.0%</u>	<u>0.05</u>	<u>0.06</u>	<u>0.07</u>
Subtotal - Basic Non-Manufacturing	11,153	14,746	3,593	3.2%	0.19	0.17	0.11
<u>Local Serving</u>							
Construction	2,963	9,270	6,307	13.5%	0.05	0.10	0.20
Local TCU	2,630	2,581	(49)	-0.2%	0.05	0.03	-0.00
Wholesale Trade - Non-Durable	635	863	228	3.5%	0.01	0.01	0.01
Retail Trade	14,177	22,468	8,291	5.2%	0.25	0.25	0.26
F.I.R.E.	3,135	4,044	909	2.9%	0.05	0.05	0.03
Local Services	<u>7,580</u>	<u>11,287</u>	<u>3,707</u>	<u>4.5%</u>	<u>0.13</u>	<u>0.13</u>	<u>0.12</u>
Subtotal - Local Serving	31,120	50,513	19,393	5.5%	0.54	0.57	0.62
Self-employed	3,500	5,406	1,906	4.9%	0.06	0.06	0.06
Government	10,325	15,948	5,623	4.9%	0.18	0.18	0.18
Total	57,577	88,931	31,354	4.9%	1.00	1.00	1.00

Source: Stanley R. Hoffman Associates, Inc.
County Business Patterns

period, the highest net growth of all basic non-manufacturing industry. The lodging industry added over 1,200 jobs during the period, bringing the total hotel and motel employment up to about 5,500.

Basic Manufacturing Industry. Basic manufacturing industries grew at an average annual rate of 5.1 percent per year since 1983. Virtually all growth in basic manufacturing occurred outside the high-technology industries, with diversified manufacturing adding about 840 net new jobs over the nine year period.

Government and Self-employed. During the nine year period, government jobs were estimated to increase by about 5,600 in the Coachella Valley. Self-employed workers were estimated to increase by about 1,900.

Eastern Coachella Valley Employment Trends

Table 3-2 presents employment trend information for the east Coachella Valley. This area added about 2,700 jobs over the period from 1983 to 1992, which accounts for only about 8.5 percent of the total employment growth in the valley. The average annual growth rate in employment for this area was about 1.8 percent, significantly less than the valley-wide annual average growth rate of 4.9 percent. While the retailing and services, and the lodging industries - particularly resort lodging - were growing substantially in other parts of the Coachella Valley, the East Valley was not sharing proportionally in this growth.

Local-serving Industry. Local serving industry experienced the most growth in the East Valley area, increasing by about 2,700 jobs over the nine year period. In 1983, local serving industry accounted for about 47 percent of the area's employment. By 1992, this share is estimated to have increased to 55 percent. About 70.8 percent of this growth--almost 1,900 jobs--was in construction, which experienced average annual growth of over 15 percent since 1983. Retail trade, the next largest growth sector, added about 700 jobs during the period, accounting for about 8.6 percent of the growth in retail trade valley-wide. Local services increased by about 300 jobs and wholesale trade for non-durables added about 80 jobs during the period for the East Valley.

Basic Non-manufacturing Industry. In the East Valley, the basic non-manufacturing industry has contracted since 1983, losing over 1,200 jobs. Most of this decline, about 1,190 jobs, is related to the declining presence of agriculture, once the East Valley's main industry. The East Valley also experienced a decline in the hotel industry, losing about 140 jobs since 1983. Industries that experienced very little growth include

TABLE 3-2
CITY OF INDIO GENERAL PLAN
EMPLOYMENT TRENDS: EAST COACHELLA VALLEY

Industry	East Coachella Valley				Distribution of Employment By Industry Type		
	Employment 1983	1992	83 - 92 Change	Annual Growth	1983	1992	Growth
<u>Basic Manufacturing</u>							
High Technology Manufacturing	0	0	0	0.0%	0.00	0.00	0.00
Diversified Manufacturing	<u>620</u>	<u>1,198</u>	<u>578</u>	<u>7.6%</u>	<u>0.04</u>	<u>0.07</u>	<u>0.22</u>
Subtotal - Basic Manufacturing	620	1,198	578	7.6%	0.04	0.07	0.22
<u>Basic Non-Manufacturing</u>							
Agriculture and Mining	2,850	1,660	(1,190)	-5.8%	0.18	0.09	-0.45
Long Distance Transportation	128	145	17	1.4%	0.01	0.01	0.01
Wholesale Trade -durable	220	277	57	2.6%	0.01	0.02	0.02
Hotels and Motels	322	184	(138)	-6.0%	0.02	0.01	-0.05
Computer Services	6	6	0	0.0%	0.00	0.00	0.00
Diversified Basic Services	<u>312</u>	<u>342</u>	<u>30</u>	<u>1.0%</u>	<u>0.02</u>	<u>0.02</u>	<u>0.01</u>
Subtotal - Basic Non-Manufacturing	3,838	2,614	(1,224)	-4.2%	0.25	0.14	-0.46
<u>Local Serving</u>							
Construction	706	2,598	1,892	15.6%	0.05	0.14	0.71
Local TCU	797	472	(325)	-5.7%	0.05	0.03	-0.12
Wholesale Trade - Non-Durable	431	511	80	1.9%	0.03	0.03	0.03
Retail Trade	3,783	4,494	711	1.9%	0.24	0.25	0.27
F.I.R.E.	342	351	9	0.3%	0.02	0.02	0.00
Local Services	<u>1,355</u>	<u>1,659</u>	<u>304</u>	<u>2.3%</u>	<u>0.09</u>	<u>0.09</u>	<u>0.11</u>
Subtotal - Local Serving	7,414	10,085	2,671	3.5%	0.47	0.55	1.00
Self-employed	950	1,112	162	1.8%	0.06	0.06	0.06
Government	2,802	3,280	478	1.8%	0.18	0.18	0.18
Total	15,624	18,289	2,665	1.8%	1.00	1.00	1.00

Source: Stanley R. Hoffman Associates, Inc.
County Business Patterns

wholesale trade, computer services, diversified basic services, and long distance transportation. Together, these three industries added about 100 jobs in the East Valley since 1983. Overall, basic non-manufacturing industry decreased in its share from 25 percent of the East Valley's jobs in 1983 to about 14 percent in 1992.

Basic Manufacturing Industry. Basic manufacturing industry in the East Valley added almost 600 jobs during the nine-year period, to almost double the number of jobs in 1983. All of the basic manufacturing growth in the East Valley occurred outside of the high-tech industries, primarily in lumber and wood products; stone, glass and clay products, and fabricated metals, machinery and transportation equipment.

During the nine-year period, basic manufacturing employment increased at a 7.6 percent annual rate. Basic manufacturing increased its employment share in the East Valley from 4 percent in 1983 to about 7 percent in 1992, capturing about 69 percent of the Coachella Valley growth. While manufacturing constitutes only about 3 percent of the Coachella Valley employment, about 52 percent was estimated to be located within the East Valley by 1992.

City of Indio Employment Trends

In 1983, as shown in Table 3-3, there were approximately 10,168 jobs in Indio. Currently, Indio is estimated to have approximately 12,370 jobs, an increase of about 2,200 jobs over the nine year period. At a 2.2 percent annual growth rate, Indio's economic expansion has been comparable to the East Valley as a whole, but slower than the larger Coachella Valley, which grew at about 4.9 percent per year over the same period.

Over the nine year period 1983 to 1992, Indio has seen a downward shift in basic non-manufacturing industry - losing over 500 net jobs. The largest job increases were in the local serving sectors, constituting over 90 percent of Indio's net increase in jobs, with diversified manufacturing and government and self-employed accounting for the remaining 10 percent.

Local-serving. Indio's local-serving industries increased by about 2,000 jobs since 1983, and continue to be the largest growth sectors of the City's economy. Construction showed the largest increase of all industries, adding about 1,070 jobs, followed by retail trade, which added about 530 jobs, and wholesale trade of non-durable goods, which increased by about 230 jobs. Local transportation, communication and utilities, finance, insurance and real estate, and other local services collectively added about 160 jobs

TABLE 3-3
CITY OF INDIO GENERAL PLAN
EMPLOYMENT TRENDS: CITY OF INDIO

Industry	City of Indio				Distribution of Employment By Industry Type		
	Employment		83 - 92 Change	Annual Growth			
	1983	1992			1983	1992	Growth
<u>Basic Manufacturing</u>							
High Technology Manufacturing	0	0	0	0.0%	0.00	0.00	0.00
Diversified Manufacturing	<u>312</u>	<u>528</u>	<u>216</u>	<u>6.0%</u>	<u>0.03</u>	<u>0.04</u>	<u>0.10</u>
Subtotal - Basic Manufacturing	312	528	216	6.0%	0.03	0.04	0.10
<u>Basic Non-Manufacturing</u>							
Agriculture and Mining	718	283	(435)	-9.8%	0.07	0.02	-0.20
Long Distance Transportation	91	40	(51)	-8.7%	0.01	0.00	-0.02
Wholesale Trade -durable	124	203	79	5.6%	0.01	0.02	0.04
Hotels and Motels	311	168	(143)	-6.6%	0.03	0.01	-0.06
Computer Services	6	6	0	0.0%	0.00	0.00	0.00
Diversified Basic Services	<u>301</u>	<u>338</u>	<u>37</u>	<u>1.3%</u>	<u>0.03</u>	<u>0.03</u>	<u>0.02</u>
Subtotal - Basic Non-Manufacturing	1,551	1,038	(513)	-4.4%	0.15	0.08	-0.23
<u>Local Serving</u>							
Construction	537	1,608	1,071	13.0%	0.05	0.13	0.49
Local TCU	431	485	54	1.3%	0.04	0.04	0.02
Wholesale Trade - Non-Durable	173	400	227	9.8%	0.02	0.03	0.10
Retail Trade	3,238	3,770	532	1.7%	0.32	0.30	0.24
F.I.R.E.	284	307	23	0.9%	0.03	0.02	0.01
Local Services	<u>1,271</u>	<u>1,350</u>	<u>79</u>	<u>0.7%</u>	<u>0.13</u>	<u>0.11</u>	<u>0.04</u>
Subtotal - Local Serving	5,934	7,920	1,986	3.3%	0.58	0.64	0.90
Self-employed	624	759	135	2.2%	0.06	0.06	0.06
Government	1,747	2,125	378	2.2%	0.17	0.17	0.17
Total	10,168	12,370	2,202	2.2%	1.00	1.00	1.00

Source: Stanley R. Hoffman Associates, Inc.
County Business Patterns

over the period. Local-serving industry increased its share of Indio's economy from about 58 percent of all jobs in 1983 to about 64 percent of all jobs in 1992.

Basic non-manufacturing. Indio's basic non-manufacturing sector lost about 500 jobs during the last nine years, reflecting the trend of the east Coachella Valley. The agriculture and mining industries decreased by about 435 jobs collectively. Indio's lodging industry also shrank, decreasing by about 143 jobs since 1983. Overall, the basic non-manufacturing industry group experienced an average decline of about 4.4 percent per year, and decreased its share of Indio's employment from about 15 percent in 1983 to about 8 percent in 1992.

Basic manufacturing. Although the County Business Patterns data revealed virtually no high-technology jobs in Indio, the diversified manufacturing sector has added about 200 jobs since 1983, increasing to about 530 jobs. This represents an annual growth rate of about 6 percent, and constitutes about 37 percent of the manufacturing growth in the East Valley. In 1983, manufacturing jobs accounted for about 3 percent of Indio's economy. This share increased to about 4 percent by 1992. Most of this growth took place in food and kindred products, stone, glass and clay, furniture and fixtures, and transportation equipment and other machinery.

3.3 Employment Projections

Several methods of projecting employment growth are used in this analysis, depending upon both the characteristics of the region for which growth is projected and the characteristics of the industry group. Historic employment trends are first analyzed, and then judgments about future growth and capture rates are made based upon both anticipated future trends, and the increasing or decreasing local competitiveness that can serve to enhance an area's expected growth.

The projections have been prepared as a range of possibilities which emphasize existing trends versus an enhanced projection which assumes certain structural changes in the local economy. The two projections are:

1. **Baseline Trends** - This scenario uses the SCAG projections prepared as part of the Regional Mobility Plan as the control totals for the Coachella Valley, East Coachella Valley, and Indio. This projection continues to emphasize an economy dominated by services, retailing, and lodging/resort activities with relatively small increases in the manufacturing sectors.
2. **Enhanced Projection** - This projection only uses the SCAG based projections for the total Coachella Valley, but assumes rather significant employment shifts

in the East Valley and Indio. Sectors that are projected to increase their currently small shares are manufacturing, lodging/resort activities, long distance transportation, and diversified basic services.

Coachella Valley Employment Growth

Table 3-4 presents the projection of employment growth by industry group for the Coachella Valley. Total employment is projected to increase from about 88,931 in 1992 to approximately 171,274 in 2020, for a net increase of 82,344 jobs. Much of this increase is projected to occur within local-serving industries, which account for about 46 percent of all projected jobs. Basic non-manufacturing industries are projected to add about 13,071 jobs by 2020, accounting for 16 percent of all new jobs in the valley. Basic manufacturing industries are projected to add about 11,666 jobs by 2020, accounting for the remaining 14 percent of all new jobs.

While services, retailing, and lodging/resort activities remain the major sectors, the projections imply a diversification of the economy toward increased manufacturing activities. Under this projection, Coachella Valley increases its share of manufacturing employment from about 3 percent to 8 percent of total employment. Further, the projected growth is primarily in the diversified manufacturing activities and not within the high technology sectors.

Local-serving. Local serving employment is projected to increase from about 50,500 existing jobs in the Coachella Valley to approximately 88,350 jobs, for a net increase of about 37,850 jobs. Retail trade is projected to add about 14,850 jobs by 2020, and will continue to be the valley's largest industry in terms of employment. Local services are also projected to increase significantly, from about 11,300 jobs in 1992 to about 24,120 in 2020 to constitute the second largest sector in terms of employment.

Basic non-manufacturing. Basic non-manufacturing employment is projected to increase from about 14,750 existing jobs to about 27,820 jobs by 2020, for a net increase of about 13,070 jobs, at an average annual growth rate of 2.3 percent. Within the basic non-manufacturing industries, diversified basic services - primarily consisting of business services - are projected to add the most jobs--about 5,400 by 2020. The lodging industry is projected to increase by about 4,850 jobs, almost doubling its current level.

Basic manufacturing. Basic manufacturing industries are projected to be the fastest growing segment of the economy for the Coachella Valley, at an average of 6.6 percent per year over the period from 1992 to 2020. As mentioned above, this assumes a shift toward manufacturing diversification. Total employment growth in basic manufacturing

TABLE 3-4
CITY OF INDIO GENERAL PLAN
EMPLOYMENT PROJECTIONS: COACHELLA VALLEY

Industry	Coachella Valley				Distribution of Employment By Type of Industry		
	Employment 1992	2020	1992 - 2020 Change	Annual Growth	1992	2020	Increment
<u>Basic Manufacturing</u>							
High Technology Manufacturing	35	82	47	3.1%	0.00	0.00	0.00
Diversified Manufacturing	<u>2,283</u>	<u>13,903</u>	<u>11,620</u>	<u>6.7%</u>	<u>0.03</u>	<u>0.08</u>	<u>0.14</u>
Subtotal - Basic Manufacturing	2,319	13,985	11,666	6.6%	0.03	0.08	0.14
<u>Basic Non-Manufacturing</u>							
Agriculture and Mining	2,634	1,917	(717)	-1.1%	0.03	0.01	-0.01
Long Distance Transportation	625	2,323	1,698	4.8%	0.01	0.01	0.02
Wholesale Trade -durable	989	2,058	1,069	2.7%	0.01	0.01	0.01
Hotels and Motels	5,491	10,330	4,839	2.3%	0.06	0.06	0.06
Computer Services	23	805	782	13.6%	0.00	0.00	0.01
Diversified Basic Services	<u>4,984</u>	<u>10,384</u>	<u>5,400</u>	<u>2.7%</u>	<u>0.06</u>	<u>0.06</u>	<u>0.07</u>
Subtotal - Basic Non-Manufacturing	14,745	27,816	13,071	2.3%	0.17	0.16	0.16
<u>Local Serving</u>							
Construction	9,270	8,780	(490)	-0.2%	0.10	0.05	-0.01
Local TCU	2,581	7,474	4,894	3.9%	0.03	0.04	0.06
Wholesale Trade - Non-Durable	863	3,108	2,245	4.7%	0.01	0.02	0.03
Retail Trade	22,468	37,317	14,849	1.8%	0.25	0.22	0.18
F.I.R.E.	4,044	7,547	3,503	2.3%	0.05	0.04	0.04
Local Services	<u>11,287</u>	<u>24,120</u>	<u>12,833</u>	<u>2.7%</u>	<u>0.13</u>	<u>0.14</u>	<u>0.16</u>
Subtotal - Local Serving	50,512	88,346	37,834	2.0%	0.57	0.52	0.46
Self-employed	5,406	10,412	5,006	2.4%	0.06	0.06	0.06
Government	15,948	30,715	14,767	2.4%	0.18	0.18	0.18
Total	88,930	171,274	82,344	2.4%	1.00	1.00	1.00

Source: Stanley R. Hoffman Associates, Inc.

is projected at about 11,700 jobs. Of this growth, virtually all employment is projected in diversified manufacturing, rather than high technology industries.

Government and Self-Employed. Government and self-employed jobs are projected to increase by about 14,800 and 5,000 respectively by 2020. These sectors are assumed to continue to maintain their relative share of about 24 percent of total jobs.

East Coachella Valley Employment Growth

Enhanced employment projections for the East Valley sub-area are presented in Table 3-5, with the SCAG based projection shown previously in Table 2-1. These projections constitute high and low projections for the East Valley. The emphasis in this discussion is on the enhanced projection which shows manufacturing increasing from 9.7 percent to about 15.0 percent of the total employment, and basic non-manufacturing increasing slightly to a 15.0 percent share, while the local serving industries correspondingly decline from 55.0 percent to about 46.0 percent of the total employment.

The underlying assumptions toward this diversification are the expected influence of the recently created Coachella Valley Enterprise Zone Authority covering major portions of the cities of Indio and Coachella, the labor and land resources to attract diversified manufacturing, and the future impact of a major air travel facility proposed for the Thermal Airport south of the City of Coachella.

Table 3-5 presents the enhanced employment projections for the east Coachella Valley. The East Valley--currently estimated to have about 18,300 jobs--is projected to add about 37,500 jobs by 2020. As with the Coachella Valley, the East Valley's largest employment increase is projected for local-serving industries--an increase of about 15,700 jobs. Basic manufacturing is projected to increase by about 7,000 jobs, followed by basic non-manufacturing at 5,800 jobs.

Local-serving. As a group, local serving industry is projected to increase at a 3.4 percent annual rate during the projection period. Retail trade is projected to add the most jobs, with about 6,050, followed by local transportation, communications and utilities, with about 2,400 jobs. Local services are projected to increase by about 2,000 jobs. The remaining local-serving industries, construction, wholesale trade of non-durable goods, and finance, insurance and real estate are projected to add a combined total of over 5,000 jobs.

Basic non-manufacturing. This industry group is projected to increase by about 5,800 jobs in the East Valley, driven primarily by wholesale trade of durable goods, long

TABLE 3-5
CITY OF INDIO GENERAL PLAN
EMPLOYMENT PROJECTIONS: EAST COACHELLA VALLEY

Industry	East Coachella Valley				Distribution of Employment By Type of Industry		
	Employment 1992	2020	1992 - 202 Change	Annual Growth	1992	2020	Increment
<u>Basic Manufacturing</u>							
High Technology Manufacturing	0	28	28	NA	0.00	0.00	0.00
Diversified Manufacturing	<u>1,198</u>	<u>8,170</u>	<u>6,972</u>	<u>7.1%</u>	<u>0.07</u>	<u>0.15</u>	<u>0.19</u>
Subtotal - Basic Manufacturing	1,198	8,198	7,000	7.1%	0.07	0.15	0.19
<u>Basic Non-Manufacturing</u>							
Agriculture and Mining	1,660	1,445	(215)	-0.5%	0.09	0.03	-0.01
Long Distance Transportation	145	934	789	6.9%	0.01	0.02	0.02
Wholesale Trade -durable	277	775	497	3.7%	0.02	0.01	0.01
Hotels and Motels	184	2,043	1,859	9.0%	0.01	0.04	0.05
Computer Services	6	365	359	15.8%	0.00	0.01	0.01
Diversified Basic Services	<u>342</u>	<u>2,845</u>	<u>2,503</u>	<u>7.9%</u>	<u>0.02</u>	<u>0.05</u>	<u>0.07</u>
Subtotal - Basic Non-Manufacturing	2,615	8,406	5,791	4.3%	0.14	0.15	0.15
<u>Local Serving</u>							
Construction	2,598	4,068	1,470	1.6%	0.14	0.07	0.04
Local TCU	472	2,875	2,402	6.7%	0.03	0.05	0.06
Wholesale Trade - Non-Durable	511	2,367	1,856	5.6%	0.03	0.04	0.05
Retail Trade	4,494	10,539	6,045	3.1%	0.25	0.19	0.16
F.I.R.E.	351	2,231	1,881	6.8%	0.02	0.04	0.05
Local Services	<u>1,659</u>	<u>3,682</u>	<u>2,023</u>	<u>2.9%</u>	<u>0.09</u>	<u>0.07</u>	<u>0.05</u>
Subtotal - Local Serving	10,085	25,762	15,678	3.4%	0.55	0.46	0.42
Self-employed	1,112	3,389	2,278	4.1%	0.06	0.06	0.06
Government	3,280	9,998	6,719	4.1%	0.18	0.18	0.18
Total	18,289	55,754	37,465	4.1%	1.00	1.00	1.00

Source: Stanley R. Hoffman Associates, Inc.

distance transportation, lodging/resort facilities, and diversified basic services. The projected average annual growth rate of 4.3 percent is relatively higher than the projected Coachella Valley rate of 2.3 percent.

Basic manufacturing. At a 7.1 percent average annual growth rate over the projection period, the basic manufacturing industry group is projected to be the most rapidly expanding economic sector in the East Valley, increasing its relative share of total employment from about 7 percent to 15 percent. Although little growth is projected for high-technology industries, other basic manufacturing industries are expected to grow in response to favorable conditions in the East Valley. The diversified manufacturing sector is projected to grow from about 1,200 current jobs to almost 8,200--a sevenfold increase.

City of Indio Employment Growth

Employment growth in Indio is projected based on the City's assumed ability to increase its capture of the employment growth projected for the east Coachella Valley. Capture assumptions are based on Indio's historic capture of industry growth in the East Valley, and then adjusted for current activities and actions that will enhance its capture rates. Some of these actions include the formation of the Coachella Valley Enterprise Authority, proposals to develop the Shadow Hills area, north of Interstate 10, with mixed commercial, housing, and lodging opportunities, and proposals to develop lodging facilities in the vicinity of the polo fields.

Table 3-6 provides a summary of Indio's current and projected employment by industry group. Indio is currently estimated to have approximately 12,370 jobs within its city limits, based on 1989 data adjusted to 1992. By 2020, Indio is projected to add about 20,000 jobs, bringing the total number of jobs up to 32,222. Of the projected growth, about 42 percent will take place among local-serving industry, 23 percent among government and self-employed, 18 percent among basic manufacturing industry, and 16 percent among basic non-manufacturing industry.

Local serving. Indio's local-serving industries are projected to add about 8,400 jobs by 2020, mostly in retail trade, construction, and finance, insurance and real estate. The local-serving industry group as a whole is projected to grow at a slower rate than the basic manufacturing and basic non-manufacturing industry groups, but because of its size, will add more jobs than the other two groups combined.

Basic Non-Manufacturing. Basic non-manufacturing employment is projected to add about 3,600 jobs by 2020 in Indio, increasing to about 4,100 by 2020. The two largest

TABLE 3-6
CITY OF INDIO GENERAL PLAN
EMPLOYMENT PROJECTIONS: CITY OF INDIO

Industry	City of Indio				Distribution of Employment By Type of Industry		
	Employment 1992	2020	1992 - 202 Change	Annual Growth	1992	2020	Increment
<u>Basic Manufacturing</u>							
High Technology Manufacturing	0	15	15	NA	0.00	0.00	0.00
Diversified Manufacturing	<u>528</u>	<u>4,119</u>	<u>3,591</u>	<u>7.6%</u>	<u>0.04</u>	<u>0.13</u>	<u>0.18</u>
Subtotal - Basic Manufacturing	528	4,134	3,606	7.6%	0.04	0.13	0.18
<u>Basic Non-Manufacturing</u>							
Agriculture and Mining	283	133	(150)	-2.7%	0.02	0.00	-0.01
Long Distance Transportation	40	358	318	8.1%	0.00	0.01	0.02
Wholesale Trade -durable	203	460	258	3.0%	0.02	0.01	0.01
Hotels and Motels	168	1,496	1,329	8.1%	0.01	0.05	0.07
Computer Services	6	185	179	13.0%	0.00	0.01	0.01
Diversified Basic Services	<u>338</u>	<u>1,594</u>	<u>1,256</u>	<u>5.7%</u>	<u>0.03</u>	<u>0.05</u>	<u>0.06</u>
Subtotal - Basic Non-Manufacturing	1,037	4,226	3,189	5.1%	0.08	0.13	0.16
<u>Local Serving</u>							
Construction	1,608	2,757	1,149	1.9%	0.13	0.09	0.06
Local TCU	485	1,183	697	3.2%	0.04	0.04	0.04
Wholesale Trade - Non-Durable	400	1,340	940	4.4%	0.03	0.04	0.05
Retail Trade	3,770	7,530	3,760	2.5%	0.30	0.23	0.19
F.I.R.E.	307	1,343	1,036	5.4%	0.02	0.04	0.05
Local Services	<u>1,350</u>	<u>2,197</u>	<u>848</u>	<u>1.8%</u>	<u>0.11</u>	<u>0.07</u>	<u>0.04</u>
Subtotal - Local Serving	7,920	16,350	8,430	2.6%	0.64	0.51	0.42
Self-employed	759	1,977	1,218	3.5%	0.06	0.06	0.06
Government	2,125	5,535	3,410	3.5%	0.17	0.17	0.17
Total	12,369	32,222	19,853	3.5%	1.00	1.00	1.00

Source: Stanley R. Hoffman Associates, Inc.

sectors are projected to be lodging, with employment increasing by about 1,300, and diversified basic services increasing by about 1,250. The fundamental assumption is that lodging/resort facilities can be attracted to the Indio area because of the influence of the polo fields and the Shadow Hills areas. The polo fields have a more established image and may attract these uses first. Increasing diversified basic services relies upon the influence of the enterprise zone, and the planned commercial development along Interstate 10.

Basic manufacturing. Basic manufacturing industries are projected to add about 3,600 jobs in Indio by 2020. Most of these jobs are projected to be in the diversified manufacturing category, such as food and kindred products, textiles, apparel, printing and publishing, metals, machinery and other equipment. Basic manufacturing industries are projected to respond to the incentives provided in the enterprise zone, which includes most of Indio's industrial land.

In summary, while Indio's economy is dependent upon the economy of the Coachella Valley as a whole, Indio has not relied as heavily on the tourism/visitor market. The enhanced forecast is projected for Indio to increase its capture of the tourism/visitor market, increase its base as a commercial center, and diversify through the development of a more substantial manufacturing base, with increases in wholesaling and long distance transportation activities. All of this will be strongly influenced by Indio's adoption and active pursuit of a comprehensive economic development strategy.

CHAPTER 4

PROJECTED DEMAND FOR NON-RESIDENTIAL LAND USES

The employment projections for the City of Indio are used to develop an jobs-driven projection of demand for non-residential land uses during the planning horizon. Briefly, this is accomplished by allocating the projected jobs between the various land use categories and converting jobs to square feet based on standard square feet per employee ratios for each land use type. This projection of demand for different land use types is based on the economic growth projected for Indio, as discussed in Chapter 3. The hotel and retail demand estimates have been cross-checked with separate market studies based on historic absorption and current competition. These market studies are presented in greater detail in Chapters 5 and 6.

4.1 Job Growth

Over the entire period from 1992 to 2020, Indio's total job growth is projected at about 19,850. This net new job growth is used to estimate demand for additional retail and employment land uses within the City.

Table 4-1 shows the projected new jobs by industry for the periods 1992-2000, 2000-2010, and 2010-2020. About 6,400 new jobs are projected for Indio by 2000, with an additional 8,500 jobs by 2010 and about 4,900 additional jobs by 2020, for a total of 19,850 new jobs. About 32 percent of the projected growth will occur during the remainder of this decade, with 43 percent of the job growth occurring between 2000 and 2010, and the remaining 25 percent occurring between 2010 and 2020. In terms of general phasing for future development, this projection calls for an increased pace of employment growth over the next two decades, followed by moderate expansion from 2010 to 2020.

About 3,600 new jobs are projected in the manufacturing sector, which is currently estimated to have only about 530 jobs. The significant increase projected for manufacturing indicates new demand for industrial and business park development--land uses that traditionally have not had much of a presence in Indio. Increases in the local services sector--such as retail and wholesale trade, tourism, construction, finance, insurance and real estate--will continue to enforce Indio's strong presence as the commercial center of the East Coachella Valley, and will represent continuing demand for retail and office development. Overall, the local services sector is projected to increase by about 8,430 jobs between 1992 and 2020.

TABLE 4-1
CITY OF INDIO GENERAL PLAN PROGRAM
CITY OF INDIO PROJECTED JOB GROWTH

	1992-2000	2000-2010	2010-2020	Total
Basic Manufacturing				
High Technology Manufacturing	4	7	3	14
Diversified Manufacturing	<u>841</u>	<u>1,782</u>	<u>968</u>	<u>3,591</u>
Subtotal - Basic Manufacturing	845	1,789	971	3,605
Basic Non-Manufacturing				
Agriculture and Mining	-122	-20	-8	-150
Long Distance Transportation	100	141	76	317
Wholesale Trade -durable	90	120	48	258
Hotels and Motels	402	669	258	1,329
Computer Services	33	74	72	179
Diversified Basic Services	<u>370</u>	<u>629</u>	<u>257</u>	<u>1,256</u>
Subtotal - Basic Non-Manufacturing	873	1,613	702	3,188
Local Serving				
Construction	508	399	242	1,149
Local TCU	199	281	217	697
Wholesale Trade - Non-Durable	275	379	287	941
Retail Trade	1,569	1,352	840	3,761
Finance, Insurance and Real Estate	277	419	340	1,036
Local Services	<u>367</u>	<u>298</u>	<u>182</u>	<u>847</u>
Subtotal - Local Serving	3,194	3,127	2,109	8,430
Self-employed	393	522	303	1,218
Government	<u>1,100</u>	<u>1,463</u>	<u>847</u>	<u>3,410</u>
Total	6,405	8,515	4,933	19,853

*Source: Stanley R. Hoffman Associates, Inc.
1989 County Business Patterns*

4.2 Allocation of Jobs to Land Uses

Absorption of commercial and other employment land uses is estimated based on the distribution of industries in which job growth is projected. As shown in Table 4-2, about 27 percent of new jobs are projected for industrial, 23 percent are projected for office, 26 percent for retail and about 6 percent for hotel. The remaining 18 percent of projected employment growth is not assumed to require any locationally specific building space. Industries with jobs in this category include agriculture and mining; long distance transportation; construction; government; and local transportation, communication and utilities. The majority of government jobs are housed in public buildings, with an estimated 30 percent assumed to locate in competitive office space. The estimated allocation of jobs among land use categories is based in part on the consultant's experience, and on factors used by THK Associates in preparing the report entitled Market Analysis, 240-Acre Site, Interstate 10 and Monroe Avenue.

Basic manufacturing. Basic manufacturing jobs are primarily allocated to industrial buildings--about 80 percent--with the remaining 20 percent allocated to office space.

Basic non-manufacturing. Basic non-manufacturing jobs are allocated about 22 percent to industrial, 30 percent to office and 40 percent to hotel, with about 4 percent in retail space. Some jobs in this category, such as long distance transportation, do not require building space for all jobs.

Local-serving. Local-serving jobs are allocated about 48 percent to retail, 22 percent to office and 17 percent to industrial. Not all construction and local transportation, communication and utilities jobs require building space, accounting for the remaining 18 percent of basic non-manufacturing jobs

These land use projections are for net developable acres, and do not include public infrastructure, schools, parks, open space, publicly owned governmental and institutional facilities, or quasi-public facilities.

4.3 Conversion of Jobs to Demand for Land Use Types

The demand for competitive office, industrial and retail space can be estimated based on the allocation of projected jobs among land use categories. Projected jobs from Table 4-1 were allocated based on the distribution in Table 4-2, resulting in phased employment projections by land use type for the period from 1992 to 2000, 2000 to 2010 and 2010 to 2020. Projected jobs are then converted to demand for square footage using 500 square feet per employee for retail, 250 square feet per employee for office,

TABLE 4-2
CITY OF INDIO GENERAL PLAN PROGRAM
ALLOCATION OF PROJECTED EMPLOYMENT TO LAND USES

Industry Group	Industrial	Office	Retail	Hotel/ Motel	Total
Basic Manufacturing					
High Technology Manufacturing	0.80	0.20	0.00	0.00	1.00
Diversified Basic Manufacturing	<u>0.80</u>	<u>0.20</u>	<u>0.00</u>	<u>0.00</u>	<u>1.00</u>
Basic Manufacturing Group Weighted Avg.	0.80	0.20	0.00	0.00	1.00
Basic Non-manufacturing					
Agriculture and Mining ¹	NA	NA	NA	NA	NA
Long Distance Transportation	0.30	0.35	0.00	0.00	0.65
Wholesales Trade - Durable	0.80	0.20	0.00	0.00	1.00
Hotels and Motels	0.00	0.00	0.00	1.00	1.00
Computer Services	0.30	0.60	0.10	0.00	1.00
Diversified Basic Services	<u>0.30</u>	<u>0.60</u>	<u>0.10</u>	<u>0.00</u>	<u>1.00</u>
Basic Non-manuf. Group Weighted Avg.	0.22	0.30	0.04	0.40	0.96
Local Serving					
Construction	0.20	0.15	0.00	0.00	0.35
Local Trans., Comm., and Utilities	0.30	0.35	0.00	0.00	0.65
Wholesale Trade - Non-durable	0.80	0.20	0.00	0.00	1.00
Retail Trade	0.10	0.10	0.80	0.00	1.00
Finance, Insurance and Real Estate	0.00	0.75	0.25	0.00	1.00
Local Services	<u>0.00</u>	<u>0.40</u>	<u>0.60</u>	<u>0.00</u>	<u>1.00</u>
Local Serving Group Weighted Avg.	0.17	0.22	0.48	0.00	0.87
Self-Employed	0.35	0.35	0.30	0.00	1.00
Government	0.15	0.15	0.00	0.00	0.30
Total - All Industries	0.27	0.23	0.26	0.06	0.82

¹ Agriculture and mining not included due to net loss of jobs during projection period.

Source: Stanley R. Hoffman Associates, Inc.
THK Associates

750 square feet per employee for industrial, and 1 employee per room for hotel. Table 4-3 shows Indio's resulting projection of demand for retail, office, industrial and hotel uses, phased over the three decades.

Retail. The employee-driven demand for retail is about 2.14 million square feet by 2020, with most of this demand--about 40 percent, or 851 thousand square feet--demanded between now and the year 2000. Total acres demanded are projected at 197, assuming average floor area ratios of 25 percent for retail development. This projection is slightly less than the market-based projection presented in Chapter 5.

Office. The employee-driven demand for office space is about 1.19 million square feet by 2020. About 31 percent of this demand is projected for 1992 to 2000; 43 percent is projected for the period from 2000 to 2010; and 26 percent is projected for the period

TABLE 4-3
CITY OF INDIO GENERAL PLAN
PROJECTION OF DEMAND FOR NON-RESIDENTIAL DEVELOPMENT

	1992-2000	2000-2010	2010-2020	Total
New jobs				
Retail	1,702	1,592	990	4,284
Office	1,468	2,056	1,242	4,766
Industrial	1,717	2,781	1,596	6,094
Hotel	402	669	258	1,329
Square feet or rooms				
Retail @ 500 s.f./emp.	851,000	796,000	495,000	2,142,000
Office @ 250 s.f./emp.	367,000	514,000	310,000	1,191,000
Industrial @ 750 s.f./emp.	1,288,000	2,086,000	1,197,000	4,571,000
Hotel @ 1 room/emp.	402	670	258	1,330
Acres				
Retail @ 25%	78	73	45	197
Office @ 35%	24	34	20	78
Industrial @ 40%	74	120	69	262
Hotel @ 40 Rooms/Acre	<u>10</u>	<u>17</u>	<u>6</u>	<u>33</u>
Total Acres	186	243	141	570

Source: Stanley R. Hoffman Associates, Inc.

from 2010 to 2020. About 78 total acres are projected, assuming an average floor area ratio of 35 percent for office development.

Industrial. As shown, the highest demand is projected for industrial/business park land, at about 4.57 million square feet by 2020. About 28 percent of this demand is during the period from 1992 to 2000; 46 percent is projected for the period from 2000 to 2010; and 26 percent is projected for the period from 2010 to 2020. About 262 acres are projected, assuming average industrial floor area ratios of 40 percent.

4.4 Conclusions About Future Land Requirements

These job-based projections of land requirements should be used as parameters for land planning in Indio. Since these estimates are based on the enhanced employment projection, as discussed in Chapter 3, the projected land requirements should be considered as providing ample land for development under most market scenarios.

Industrial. About 46 percent of the acreage is projected for industrial uses, more than any other land use. This is in response to the anticipated growth in the manufacturing sector due to the activities of the enterprise zone. Current development activity in the East Coachella Valley is focusing on the industrial market, as evidenced by the 1,000 acre Mistui Fudosan development of Rancho Coachella Business Park. Projected improvements to the Thermal Airport are also anticipated to increase the attractiveness of this area to business. With this potential for new industrial park development, Indio should consider taking steps to provide a mix of industrial parcels suitable for a diversity of users.

Retail. The projected long-term demand for retail land indicates a continued growth in this market, despite current difficulties in the retail market. Based on the projection of new households, much of the growth in the retail market will be directly related to local demand. Growth in Indio's retail market may also occur in response to regional markets accessed through the City's developing frontage along Interstate 10. Although 197 new acres are projected to satisfy future retail demand, the City must also successfully revitalize struggling shopping centers, including upgrading the downtown commercial uses, as well as retail uses along Highway 111, such as the Indio Fashion Mall.

Office. Indio's projected demand for commercial and professional office land is lower than for retail or industrial, at about 78 acres--about 14 percent of the total. Employment projections for the finance, insurance and real estate industry, as well as other users of professional-type office space are not as robust as for other sectors of the economy,

resulting in a lower demand. However, the projection of 78 new office acres, if accomplished through several master-planned office developments, could require several parcels of significant size. The City should consider reserving or assembling sites that could consolidate this demand onto contiguous parcels, allowing for design amenities and creating an "urban center" image. Such development could very well center around government, educational and other uses in the Civic Center area, or along the Interstate 10 corridor.

CHAPTER 5

PROJECTED REQUIREMENTS FOR RETAIL SPACE AND LAND

The preceding chapter provided job-driven projections of demand for retail, office, industrial and hotel development. This chapter provides a market-based projection of retail demand for Indio, using taxable sales data, permanent and seasonal household income projections and capture assumptions for the Indio, East Valley and Coachella Valley market areas.

5.1 Existing Retail Conditions

Because of its year-round economy, Indio has maintained one of the higher levels of taxable retail sales per capita in the Coachella Valley. At about \$11,100 in retail sales per capita, Indio is above the Coachella Valley average of about \$9,300 per capita and the West Coachella Valley average of \$10,400. However, at \$1,500, Indio is well below the Coachella Valley taxable non-retail sales per capita average of \$2,100, which is driven primarily by sales from resort hotels.

Distribution of Sales Volume. Table 5-1 shows 1990 taxable sales volume and distribution for the West Coachella Valley, the East Coachella Valley and for Indio. Taxable retail sales are transactions that take place in retail outlets; taxable non-retail sales consist primarily of taxable sales in hotels and other non-retail outlets. The West Coachella Valley market area captures about 76 percent of valley-wide taxable retail sales, and about 84 percent of the taxable non-retail sales. The East Coachella Valley market area captures about 24 percent of the valley's taxable retail sales, and about 16

TABLE 5-1
CITY OF INDIO GENERAL PLAN PROGRAM
DISTRIBUTION OF TAXABLE SALES IN THE COACHELLA VALLEY
(Thousands of 1990 Dollars)

Taxable Sales Category	West Coachella Valley	East Coachella Valley	Total Coachella Valley
Retail Sales	\$1,585,000	\$502,000	\$2,087,000
Non Retail Sales	<u>\$405,000</u>	<u>\$76,000</u>	<u>\$482,000</u>
Total Sales	\$1,990,000	\$578,000	\$2,569,000
Percentage Distribution			
Retail Sales	75.9%	24.1%	100.0%
Non Retail Sales	<u>84.0%</u>	<u>15.8%</u>	<u>100.0%</u>
Total Sales	77.5%	22.5%	100.0%

Source: California State Board of Equalization

percent of the valley's non-retail taxable sales. Indio currently captures about 20 percent of the total taxable retail sales in the valley, and about 11 percent of the taxable non-retail sales. In the East Valley market area, Indio captures about 82 percent of taxable retail sales and about 71 percent of taxable non-retail sales. West Coachella Valley captures a proportionately greater share of the non-retail sales than the East Coachella Valley due to taxable non-retail sales from resort hotels.

Distribution of Sales by Type of Store. Table 5-2 shows the distribution of taxable sales by type of store or outlet. In the West Valley, sales of apparel, food from eating and drinking places, other retail stores and from hotels comprise a significantly larger portion of total sales than in the East Valley and Indio. Together, these four categories comprise about 38 percent of all taxable sales for the West Valley, while in the East Valley, these same four categories represent only about 13 percent of total taxable sales. This difference is explained by the tourist and resort related retail sales from restaurants, boutiques and hotels that are more prevalent in the western portion of the valley. The East Valley's taxable sales distribution shows a larger share of taxable sales from general merchandise stores, food stores, and auto dealers and service stations, reflecting the local- and community-serving nature of retailers in this area. It should be noted that the East Valley and Indio show no taxable sales related to hotels and motels, while this category represents about 7 percent of taxable sales for the west valley.

Taxable sales data show that even without receiving as much of the tourism-related retail dollar, Indio has demonstrated a significant capture of taxable sales due to its presence as the commercial center of the East Coachella Valley. Indio has also demonstrated that its capture of year-round local purchases yields, on average, more taxable sales per capita than the Coachella Valley as a whole.

Indio's Retail Capture. Table 5-3 presents a comparison of Indio's actual 1990 retail sales with the expected 1990 retail sales based on purchasing power estimates. The estimated local purchasing power, shown in column B, is based on Indio's 1990 average household income of about \$31,691 applied to permanent and seasonal households, using expenditure patterns for Riverside County to approximate the distribution of local demand. Also included in this purchasing power estimate are purchases made by visitors in Indio as presented in Table 5-4. Visitor expenditures are estimated at \$201 per visitor, with about 163,000 visitors estimated for 1990. Local purchasing power is estimated as shown in Table 5-4, amounting to some \$183.8 million in 1990.

TABLE 5-2
CITY OF INDIO GENERAL PLAN PROGRAM
1990 TAXABLE SALES: VOLUME AND DISTRIBUTION
(In Thousands of 1990 Dollars)

TYPE OF OUTLET	TAXABLE SALES				DISTRIBUTION			
	WEST COACHELLA VALLEY \1	EAST COACHELLA VALLEY \2	CITY OF INDIO	TOTAL COACHELLA VALLEY	WEST COACHELLA VALLEY	EAST COACHELLA VALLEY	CITY OF INDIO	TOTAL COACHELLA VALLEY
<u>Retail Stores</u>								
Apparel Stores	\$168,091	\$8,182	\$7,928	\$176,273	8.4%	1.4%	1.7%	6.9%
Gen. Merchandise	173,163	63,480	63,480	236,643	8.7%	11.0%	13.7%	9.2%
Drug Stores	20,133	9,414	9,414	29,547	1.0%	1.6%	2.0%	1.2%
Food Stores	345,243	167,236	115,430	512,480	17.4%	28.9%	24.8%	19.9%
Packaged Liquor	13,212	2,067	2,067	15,279	0.7%	0.4%	0.4%	0.6%
Eating & Drinking	212,958	38,678	33,524	251,637	10.7%	6.7%	7.2%	9.8%
Home Furn. & Appliances	89,410	8,369	8,369	97,779	4.5%	1.4%	1.8%	3.8%
Bldg. Matr. & Farm Implmts.	91,123	46,011	41,376	137,134	4.6%	7.9%	8.9%	5.3%
Auto Dealers & Auto Supplies	150,045	86,455	80,312	236,500	7.5%	14.9%	17.3%	9.2%
Service Stations	76,095	45,964	30,554	122,060	3.8%	7.9%	6.6%	4.8%
Other Retail Stores	<u>245,350</u>	<u>25,920</u>	<u>17,025</u>	<u>271,270</u>	<u>12.3%</u>	<u>4.5%</u>	<u>3.7%</u>	<u>10.6%</u>
Subtotal: Retail Stores	\$1,584,823	\$501,777	\$409,479	\$2,086,600	79.7%	86.6%	88.1%	81.2%
<u>Non-retail Outlets</u>								
Hotels & Motels	\$133,677	\$0	\$0	\$133,677	6.7%	0.0%	0.0%	5.2%
Other Outlets	<u>271,089</u>	<u>77,534</u>	<u>55,119</u>	<u>348,623</u>	<u>13.6%</u>	<u>13.4%</u>	<u>11.9%</u>	<u>13.6%</u>
Subtotal: Non-retail Outlets	\$404,766	\$77,534	\$55,119	\$482,300	20.3%	13.4%	11.9%	18.8%
Total, All Outlets	\$1,989,589	\$579,311	\$464,598	\$2,568,900	100.0%	100.0%	100.0%	100.0%
1990 Population	152,900	72,100	36,800	225,000				
Per Capita Retail Sales	\$10,400	\$7,000	\$11,100	\$9,300				
Per Capita Non-Retail Sales \3	\$2,600	\$1,100	\$1,500	\$2,100				

1\ West Coachella Valley includes Desert Hot Springs, Palm Springs, Cathedral City, Rancho Mirage, Indian Wells, La Quinta and adjacent unincorporated communities.

2\ East Coachella Valley includes the cities of Indio and Coachella as well as the unincorporated communities of Thermal and Mecca and adjacent unincorporated areas.

3\ Includes taxable sales from hotels.

Source: California State Board of Equalization

TABLE 5-3
CITY OF INDIO GENERAL PLAN PROGRAM
EXISTING RETAIL CONDITIONS
(In Thousands of 1990 Dollars)

RETAIL CATEGORY	ACTUAL RETAIL SALES	ESTIMATED LOCAL EXPENDITURES	ESTIMATED NON-LOCAL CAPTURE	EXISTING CAPTURE RATE
	(A)	(B)	(A - B)	(A/B)
Apparel Stores	\$7,928	\$7,243	\$685	1.09
Gen. Merchandise	63,480	18,864	44,616	3.37
Drug Stores	9,414	5,296	4,118	1.78
Food Stores	115,430	52,729	62,701	2.19
Packaged Liquor	2,067	1,488	579	1.39
Eating & Drinking	33,524	17,149	16,375	1.95
Home Furn. & Appliances	8,369	6,592	1,777	1.27
Bldg. Matr. & Farm Implmts.	41,376	18,754	22,622	2.21
Auto Dealers & Auto Supplies	80,312	25,400	54,912	3.16
Service Stations	30,554	14,791	15,763	2.07
Other Retail Stores	<u>17,025</u>	<u>15,509</u>	<u>1,516</u>	<u>1.10</u>
Retail Stores Totals	\$409,479	\$183,815	\$225,664	2.23
Share of Retail Sales	100%	45%	55%	

Source: Stanley R. Hoffman Associates, Inc.

TABLE 5-4
CITY OF INDIO GENERAL PLAN PROGRAM
ESTIMATION OF EXISTING PURCHASING POWER: INDIO
(In 1990 Dollars)

<u>Permanent Households</u>	
Permanent Households	11,387
Average Household Income	\$31,691
Total Household Income (\$1,000s)	\$360,865
Share Spent on Retail Sales	40%
Retail Purchasing Power (\$1,000s)	\$144,346
<u>Seasonal Households</u>	
Seasonal Households	1,342
Presence at 40% Occupancy	537
Average Household Income	\$31,691
Total Household Income, (\$1,000s)	\$17,012
Share Spent on Retail Sales	40%
Retail Purchasing Power (\$1,000s)	\$6,805
<u>Visitor Expenditures</u>	
Total Visitors to Coachella Valley, 1990	2,080,780
Indio Capture at 7.8%	163,000
Average expenditure per visit	\$201
Estimated 1990 Visitor Expenditure (\$1,000s)	\$32,664
Total Local Retail Purchasing Power (\$1,000s)	\$183,815

Source: Stanley R. Hoffman Associates, Inc.
Statistical Abstract of the United States, 1991
Urban Decisions Systems
California State Department of Finance

As shown in column A of Table 5-3, Indio's actual retail sales--at \$409.5 million--are much higher than the purchasing-power estimate shown in column B--at \$183.8 million. Since retail sales are higher than the purchasing power estimate would indicate, it follows that Indio captures a large portion of its retail sales from households or visitors from outside the City. Based on this estimate in Table 5-3, a minimum of about 55 percent of Indio's retail sales are currently supported by households and visitors from outside the City.

Existing retail conditions in Indio can be summarized as follows:

- The East Coachella Valley captures about one-fourth of the valley's total retail sales and about 16 percent of taxable non-retail sales.
- Indio's taxable sales per capita is well above the Coachella Valley average.
- Indio's distribution of retail sales by store type demonstrates strength in retail sales oriented toward permanent and seasonal households.
- By providing a diversified group of retail opportunities, Indio has become the commercial center of the eastern portion of the Coachella Valley.
- To remain a commercial center, Indio needs to enhance existing retail locations, and create new retail opportunities.

5.2 Purchasing Power Projection

As residential land develops in and around Indio, demand for retail goods is expected to rise proportionally. Additionally, as access to regional retail along Interstate 10 frontage develops, Indio may begin to capture more regional purchasing power. This section discusses the projected increase in purchasing power from three market segments: permanent households, seasonal households, and visitors. In this projection, capture assumptions are made to account for Indio's demonstrated ability to draw shoppers from outside the immediate community. Different capture assumptions are made for the primary, secondary and tertiary market areas, based on Indio's projected ability to draw purchasing power from each area.

Market areas and capture assumptions. The primary market area is defined as the City of Indio, with retail centers in Indio assumed to capture 80 percent of the purchasing power generated in this area. The secondary market area is defined as the East Coachella Valley, consisting of Coachella, and the unincorporated communities to the south, including Thermal and Mecca. Retail projects in Indio are assumed to capture 65 percent of the purchasing power from this area. The tertiary market area is defined as

the west Coachella Valley, of which retail projects in Indio are assumed to capture 5 percent of the total purchasing power.

Table 5-5 shows the projection of purchasing power in 2020 by market segment (permanent, seasonal, and visitor) and market area (primary, secondary, and tertiary). Total purchasing power is projected at about \$842.0 million in 2020. Of this amount, about 63 percent is estimated to be from the primary market area, about 18 percent from the secondary market area, and about 19 percent from the tertiary market area. Using the capture assumptions presented above, this projection shows a shift toward a greater share of sales to local households as Indio develops new residential areas such as Shadow Hills. Currently, about 45 percent of Indio's retail sales are from the primary market area; by 2020, this is projected to increase to about 63 percent from the primary market area.

Purchasing power from permanent households. Total purchasing power from permanent households is estimated at about \$687.6 million by 2020. By this time, Indio is projected to have about 30,700 permanent households. Average household income is projected to be \$42,715 in 1991 dollars in 2020, using a 1990, census-based income estimate of \$31,691 as estimated by Urban Decisions Systems (UDS), and a one percent per year average real increase in household income to reflect the changing demographic conditions in Indio. The secondary market area is projected to have about 13,700 households by 2020, at an average household income of \$37,769 in 1991 dollars. The tertiary market area is projected to have about 106,200 households by 2020, at an average household income of \$62,994 in 1991 dollars. Income figures for these two market areas for 2020 were also estimated using 1990 UDS household income estimates and a one percent average annual real increase in household income.

Purchasing power from seasonal households. Purchasing power from seasonal households is projected at about \$83.5 million by 2020. With about 7,670 seasonal households in the primary market area, about 3,758 seasonal households in the secondary market area, and about 53,000 seasonal households in the tertiary market area by 2020. Average household income for seasonal households is assumed to be the same as the permanent households for each market area. However, since seasonal households are only present part of the year, their effective seasonal buying power is estimated by assuming a 40 percent average occupancy level.

Purchasing power from visitors. About 2.16 million tourists visited the Coachella Valley in 1991, according to the recent market study Market Analysis, 240-Acre Site, Interstate

TABLE 5-5
CITY OF INDIO GENERAL PLAN PROGRAM
RETAIL SALES PROJECTION FOR INDIO: 2020
(In 1991 Dollars)

MARKET SEGMENT	PRIMARY MARKET AREA	SECONDARY MARKET AREA	TERTIARY MARKET AREA	TOTAL	DISTRIBUTION OF RETAIL SALES BY MARKET SEGMENT
<u>Permanent Households</u>					
Permanent Households	30,686	13,685	106,206		
Average Household Income \1	\$42,715	\$37,769	\$62,994		
Total Household Income (\$1,000s)	\$1,310,743	\$516,875	\$6,690,385		
Share Spent on Retail Sales \2	40%	40%	40%		
Retail Purchasing Power (\$1,000s)	\$524,297	\$206,750	\$2,676,154		
Capture Rate by Indio	80.0%	65.0%	5.0%		
Retail Sales Captured in Indio (\$1,000s)	\$419,438	\$134,387	\$133,808	\$687,633	82%
<u>Seasonal Households</u>					
Seasonal Houeholds	7,671	3,758	53,094		
Presence at 40% Occupancy	3,068	1,503	21,238		
Average Household Income	\$42,715	\$37,769	\$62,994		
Total Household Income (\$1,000s)	\$131,066	\$56,775	\$1,337,850		
Share Spent on Retail Sales	40%	40%	40%		
Retail Purchasing Power (\$1,000s)	\$52,426	\$22,710	\$535,140		
Capture Rate By Indio	80.00%	65.00%	5.00%		
Retail Sales Captured in Indio (\$1,000s)	\$41,941	\$14,761	\$26,757	\$83,460	10%
<u>Visitors</u>					
Visitors to Coachella Valley	3,878,700				
Non-hotel Expenditure per Visitor \3	\$201				
Total Visitor Expenditure (\$1,000s)	\$779,619				
Indio Capture of Coachella Valley \4	9.1%				
Visitor Purchasing Power Captured by Indio (\$1,000s)	\$70,945			\$70,945	8%
Total Retail Sales Captured by Indio (\$1,000s)	\$532,324	\$149,149	\$160,565	\$842,038	100%
Share of Retail Sales by Market Area	63%	18%	19%	100%	
\1 Average household income from Urban Decisions Systems 1990 estimate, inflated at a 1% real annual growth rate. \2 Based on expenditure patterns from Statistical Abstract of the United States, 1991 \3 Based on data contained in Visitor Research Data, compiled by Palm Springs Desert Resorts Convention and Visitor's Bureau. \4 Based on Indio's projected share of the hotel market; approximates visitor location patterns.					

Source: Stanley R. Hoffman Associates, Inc.

10 and Monroe Avenue by THK Associates. By 2020, the Coachella Valley is projected to have about 3.88 million visitors annually (see Chapter 6, Projected Demand for Hotel Rooms). Visitor purchasing power is estimated using the summary information about visitor expenditure patterns shown in Table 5-6. Based on Palm Springs Desert Resorts Convention and Visitor's Bureau estimates, taxable non-hotel retail sales from visitors to the valley totaled about \$434.2 million in 1991. This estimate includes the "Other Restaurants" and "Retail" categories from Table 5-6. As shown in the bottom panel of Table 5-6, this amounted to retail expenditures of about \$201 per visitor for 1991. Visitor purchasing power is projected for 2020 by applying this expenditure factor to the 3.88 million projected visitors. Indio is estimated to capture about 9 percent of this visitor purchasing power based on its share of hotel rooms by 2020 (see Chapter 6). Based on the projected share of the hotel market, Indio is estimated to capture about \$70.9 million in non-hotel retail sales from visitors by 2020.

TABLE 5-6
CITY OF INDIO GENERAL PLAN
ESTIMATED VISITOR IMPACT: 1991

Visitor Expenditure Category	Expenditure (\$1,000s)	Share of Total Expenditure
(1) Hotel Room	\$272,315	27.3%
(2) Hotel Restaurant	\$78,953	7.9%
(3) Other Restaurants	\$250,017	25.1%
(4) Retail	\$184,223	18.5%
(5) Transportation	\$65,794	6.6%
(6) Entertainment/Recreation	\$92,112	9.2%
(7) Personal	\$13,158	1.3%
(8) Other	<u>\$39,476</u>	4.0%
Total	\$997,640	100.0%
Taxable Retail Sales from Visitors (3 + 4)	\$434,240	43.0%
Number of Visitors, 1991	2,160,230	
Taxable Retail Sales per Visitor	\$201	

*Source: Stanley R. Hoffman Associates, Inc.
Palm Springs Desert Resorts Convention and Visitor's Bureau*

5.3 Projection of Future Retail Space Requirements

Indio's future retail requirement is estimated by comparing future retail space needs with existing retail space. Table 5-7 provides a summary of this projection.

Allocation of Retail Sales. Retail sales are projected at about \$842.0 million by 2020--more than double Indio's current retail sales of about \$409.5 million. Projected retail sales are allocated between regional, community and neighborhood shopping center space using allocation factors developed from Urban Land Institute's (ULI) 1990 Dollars and Cents of Shopping Centers. For permanent and seasonal households, about 77.7 percent of total retail demand is met by one of these three center types, with the remainder going toward automotive and other retail categories that typically occur outside of shopping center space. Visitor-related retail sales are allocated 20 percent to regional centers, 60 percent to community centers and 20 percent to neighborhood centers.

Retail Sales by Center Type. Using the allocation factors described above, retail expenditures in Indio in 2020 are projected at about \$160.7 million for regional centers, \$262.3 million for community centers, and about \$247.1 million for neighborhood centers. Total retail expenditures occurring in retail shopping center space are estimated at about \$670.1 million, with about \$172.0 million in sales occurring outside retail shopping centers.

Conversion of Demand into Square Feet. Retail demand is converted into space requirements using standard annual sales per square foot factors developed from ULI data. The following sales per square foot factors are used:

Regional Shopping Centers	\$183
Community Shopping Centers	\$156
Neighborhood Shopping Centers	\$135

Using these factors, about 4.4 million square feet is projected to be required by 2020, with about 900,000 square feet of regional space, 1.7 million square feet of community space and 1.8 million square feet of neighborhood space.

Projection of Space Required. The net retail land requirement is a function of total future demand and existing retail space. Existing retail space in Indio is estimated at about

TABLE 5-7
CITY OF INDIO GENERAL PLAN PROGRAM
PROJECTED RETAIL REQUIREMENTS: 2020
(In Thousands of 1991 Dollars)

	Expenditures Captured By Indio	Regional Shopping Centers	Community Shopping Centers	Neighborhood Shopping Centers	Total Retail Space
<u>Allocation of Retail Sales</u>					
Permanent & Seasonal Households	\$771,092	19.0%	28.5%	30.2%	77.7%
Visitor Retail Expenditures	\$70,946	<u>20.0%</u>	<u>60.0%</u>	<u>20.0%</u>	<u>100.0%</u>
Total Retail Sales Captured	\$842,038	19.1%	31.2%	29.3%	79.6%
<u>Retail Sales By Center Type</u>					
Permanent & Seasonal Households		\$146,507	\$219,761	\$232,870	\$599,138
Visitor Retail Expenditures		\$14,189	\$42,568	\$14,189	\$70,946
Total Retail Sales Captured		\$160,697	\$262,329	\$247,059	\$670,084
<u>Conversion of Retail Sales into Square Feet</u>					
Total Retail Dollars Captured		\$160,697	\$262,329	\$247,059	\$670,084
Divided by: Sales Per Sq. Ft.		\$183	\$156	\$135	\$152
Equals: Square Feet Demanded		900,000	1,700,000	1,800,000	4,400,000
<u>Projection of Net GLA Required, 2020</u>					
Square Feet Demanded		900,000	1,700,000	1,800,000	4,400,000
Less: Estimated Existing Retail GLA		(218,000)	(941,000)	(932,000)	(2,091,000)
Equals: Net Demand (square feet)		682,000	759,000	868,000	2,309,000

Source: Stanley R. Hoffinan Associates, Inc.

2.09 million square feet based on existing sales. This retail supply is estimated to be allocated by center type as follows:

Regional Shopping Centers	218,000 square feet	10.4%
Community Shopping Centers	941,000 square feet	45.0%
Neighborhood Shopping Centers	<u>932,000 square feet</u>	<u>44.6%</u>
Total Existing Retail Space	2,091,000 square feet	100.0%

About 2.3 million net new square feet will be required to support the projected future demand in the year 2020. This figure is estimated by subtracting existing square footage--about 2.09 million square feet--from the total retail space requirement at 2020--about 4.4 million square feet. This future retail requirement is estimated to be allocated as follows:

Regional Shopping Centers	682,000 square feet	29.5%
Community Shopping Centers	759,000 square feet	32.9%
Neighborhood Shopping Centers	<u>868,000 square feet</u>	<u>37.6%</u>
Total Net Requirement	2,309,000 square feet	100.0%

Using an average floor area ratio of 25 percent, this represents an additional 212 net acres for retail development by the year 2020. This demand-based projection is slightly higher than the job-based projection of 197 retail acres in Chapter 4, and provides independent support for that projection.

5.4 Competitive Retail Development

Projections for retail land requirements in the City of Indio are based on the assumption that the City aggressively pursues retail development opportunities in Shadow Hills, the Interstate 10 Corridor, and along Highway 111, particularly around the Indio Fashion Mall and the auto dealerships. Although significant levels of retail demand are projected for Indio, increasing competition from projects in Rancho Mirage, Coachella and La Quinta could effectively draw away purchasing power from within Indio. Indio must remain competitive with projects in the secondary and tertiary market areas to assure that projects in its primary market area are able to capture their projected local market share. Current competition within the secondary and tertiary market areas is summarized in Table 5-8.

The retail square footage summarized in Table 5-8 provides an indication of where new retail markets are emerging, due to increased demand, land availability and cost, or

TABLE 5-8
CITY OF INDIO GENERAL PLAN PROGRAM
SURVEY OF CURRENT RETAIL DEVELOPMENT ACTIVITY
(square feet)

Development Status	Primary Market Area: Indio	Secondary Market Area: Coachella	Tertiary Market Area: La Quinta/ Rancho Mirage / Palm Desert / Indian Wells	Total Competition: Secondary and Tertiary Market Areas
Proposed	487,900	0	610,000	610,000
Approved	13,400	2,041,000	1,119,200	3,160,200
Under Construction	<u>58,800</u>	<u>242,700</u>	<u>5,200</u>	<u>247,900</u>
Total	560,100	2,283,700	1,734,400	4,018,100
<i>Note: In this survey, tertiary market area includes only the cities listed above, and does not include Palm Springs, Cathedral City, or Desert Hot Springs. (See Table 5-9 for detailed information)</i>				

Source: Cities of Indio, Coachella, Rancho Mirage, La Quinta and Palm Desert, Development Activity Reports

some combination. As shown, Coachella currently has about 2.04 million square feet of retail development approved; however, not all of this potential development is likely to materialize. Coachella had about 242,700 square feet of retail under construction as of October, 1991. Much of the approved retail development is part of the McNaughton property specific plan, approved in concept by the City's Planning Commission, but not approved on a project by project basis. Given its proximity to Indio, newer retail development in Coachella may be able to capture an increasing portion of Indio's purchasing power away from older shopping centers in Indio. In comparison to the City of Coachella, Indio currently has about 13,400 square feet of retail space approved, with another 58,800 under construction as of November, 1991. Another 487,900 square feet are proposed, most of this within the Pacific Indio project along the I-10 freeway. Including proposed development, Indio's total new retail development is about one-fourth the amount of that proposed in Coachella. However, no determination has been made of the viability of these projects.

Retail projects in the tertiary market area--in this case, consisting of projects in La Quinta, Rancho Mirage, Indian Wells and Palm Desert--total about 1.73 million square feet. A large portion of this development activity is proposed for the Monterey Marketplace in Rancho Mirage, located at Monterey Avenue and Interstate 10. These are primarily off-price or discount stores. In addition, the City of La Quinta has recently approved a 600,000 square foot retail shopping center on Highway 111, including tenants such as Walmart, Payless Drugs and Albertsons. Both of these projects will draw from Indio's

primary and secondary market areas, capturing additional purchasing power away from Indio. Table 5-9 provides more detailed information on proposed retail development.

TABLE 5-9
CITY OF INDIO GENERAL PLAN PROGRAM
SUMMARY OF COMPETITIVE RETAIL SPACE IN CURRENT PLANNING
(As of November, 1991)

PROJECT	CITY	FAR	ACRES	SQ. FT	STATUS
INDIO FASHION MALL	INDIO	0.21	9.61	89,000	P
TOWN AND COUNTRY	INDIO	0.30	2.99	39,675	C
UNNAMED	INDIO	0.41	0.55	9,850	P
MOBILE OIL	INDIO	0.21	0.11	972	P
K-MART	INDIO	0.21	2.06	19,084	C
UNNAMED	INDIO	0.21	0.28	2,628	P
CANCUN RESTAURANT	INDIO	0.13	0.52	2,884	P
UNNAMED	INDIO	0.22	1.00	9,600	P
SMART & FINAL	INDIO	0.27	1.15	13,400	A
PACIFIC INDIO PROPERTIES	INDIO	0.21	20.40	188,833	P
PACIFIC INDIO PROPERTIES	INDIO	0.21	17.00	157,361	P
CANNED FOOD OUTLET	INDIO	0.21	2.89	26,752	P
SUB-TOTAL: PRIMARY MARKET AREA			58.57	560,038	
UNNAMED	COACHELLA	0.21	0.18	1,632	C
CHIEF AUTO	COACHELLA	0.21	4.11	38,000	C
K-MART/SHOPPING CENTER	COACHELLA	0.21	17.65	163,339	C
COACHELLA SHOPPING CENTER	COACHELLA	0.21	2.73	25,300	C
CARL'S JR.	COACHELLA	0.21	0.37	3,400	C
COACHELLA PLAZA	COACHELLA	0.21	1.19	11,060	C
HAROLD MCNAUGHTON SP	COACHELLA	0.21	103.00	953,420	A
LUSARDI SP	COACHELLA	0.21	46.00	425,799	A
BRANDENBURG SP	COACHELLA	0.21	71.50	661,840	A
SUB-TOTAL: SECONDARY MARKET AREA			246.72	2,283,789	
PLAZA LA QUINTA	LA QUINTA	0.21	1.70	15,710	A
PLAZA TAMPICO	LA QUINTA	0.21	2.07	19,166	A
TRANSPACIFIC	LA QUINTA	0.21	65.85	609,565	A
KOENIG COMPANIES	LA QUINTA	0.21	12.60	116,660	A
PHARMACY	LA QUINTA	0.21	0.46	4,250	A
DESERT GOLF CENTER	RANCHO MIRAGE	0.21	0.56	5,200	C
MARBLE	RANCHO MIRAGE	0.21	0.21	1,980	P
MONTEREY MARKET PLACE	RANCHO MIRAGE	0.23	50.00	508,000	P
PAVILLIONS	RANCHO MIRAGE	0.21	11.00	100,000	P
PIZZA HUT	PALM DESERT	0.21	0.32	3,000	A
OLIPHANT DESIGN CENTER	PALM DESERT	0.05	4.70	9,702	A
UNNAMED	PALM DESERT	0.21	6.53	60,445	A
ENJOY DEV.	PALM DESERT	0.21	8.67	80,300	A
DSL	PALM DESERT	0.22	20.00	190,394	A
UNNAMED	PALM DESERT	0.21	1.08	10,000	A
SUB-TOTAL: TERTIARY MARKET AREA			185.77	1,734,372	

Acres or square feet estimated using floor area ratio of 0.25 where not available.

Status: P=proposed; A=approved; C=under construction

Source: City Planning Departments-Indio, Coachella, La Quinta, Indian Wells, Palm Desert, Rancho Mirage

5.4 Conclusion

Retail data has shown that Indio's retail development has exhibited above-average performance, as evidenced by Indio's per capita retail sales. Additionally, Indio's high capture estimate indicates that the City serves a market area reaching a good distance beyond its actual border. According to the capture analysis, as of 1990, more than 55 percent of the retail sales in Indio were to households and visitors outside of Indio. However, even with this record, Indio's retail industry is at a major turning point. Recent impacts from the recession, the potential loss of major tenants, including auto dealers, to surrounding communities and difficulties in restoring the Fashion Mall to full operational status demonstrate that some of the City's major retail developments are in jeopardy.

These recent downturns have been driven by aggressive retail development undertaken within surrounding cities. Coachella's recent approval of over two million square feet of retail space indicates its intent to compete in what was once primarily Indio's trade area. Resort cities to the west have undertaken development of community-oriented centers with access to newer communities of permanent residents. In the process, new retail projects with an updated mix of tenants and retail concepts have begun to draw some of Indio's purchasing power away from Indio's retail centers. Indio residents have recently demonstrated an increased willingness to drive into surrounding communities to shop at newer stores with more amenities. Indio's retail development has not yet aggressively responded to this upsurge in competition from surrounding communities.

Although current market activity shows that Indio is losing its retail competitiveness, the City still has the fundamental qualities for retail development, such as central location and access to an increasing market area. Indio's central location among the growing population centers in Coachella, Rancho Mirage and La Quinta allows access to a large share of the fastest growing area in the Coachella Valley. Developing employment centers in southeast Indio and Coachella can be expected to increase traffic through Indio along I-10 and Highway 111, further augmenting Indio's access to non-local markets. Additionally, master planned developments such as the Del Webb Resort, the McNaughton specific plan, the Rancho Coachella Business Park and Shadow Hills will continue to establish the East Valley's image as a balanced, year-round community.

To ensure that Indio's retail industry can continue to capture its share of this developing market, Indio cannot just continue the status quo approach, but must develop a coordinated approach to attract and retain high quality retail development with an attractive mix of tenants. Such an approach could include strategies using redevelopment incentives, design overlays, enterprise zone incentives, or sales tax

rebates to attract or retain key retail establishments. Such an approach could also involve specific strategies for areas such as the downtown/civic center, the Highway 111 corridor, and Shadow Hills.

CHAPTER 6

PROJECTED DEMAND FOR HOTEL ROOMS

This chapter provides a more detailed projection of the demand for hotel rooms within Indio during the General Plan horizon. Projections are based on trend data, visitor projections by the Palm Springs Convention and Visitors Bureau, and assumptions about Indio's ability to attract new resort development.

6.1 Hotel Industry Trends in the Coachella Valley

Historic hotel industry data has been compiled for the Coachella Valley, and is presented in this section.

Growth of hotel room supply. Table 6-1 presents historic hotel data for the Coachella Valley for the period between 1983 and 1991. The total number of rooms in the Coachella Valley increased by 5,658 during this period, from 10,294 in 1983 to 15,952 as of December, 1991. This represents an average annual increase of about 707 rooms per year. A large portion of this growth--3,203 rooms or 57 percent--has taken place in the resort cities of Palm Desert, Rancho Mirage, and Indian Wells. Indio added 285 hotel/motel rooms during this period, or about 36 rooms per year on average, with non of these rooms in the resort category. Over the eight year period, the valley's increase in hotel rooms average 5.6 percent annually. Within the resort cities, however, this growth rate averaged 16.4 percent, almost triple the valley-wide rate. Indio's supply of hotel rooms grew at an average annual rate of 3.3 percent, which was slower than the Coachella Valley average.

Location of hotel room supply. Table 6-2 shows distribution of growth in hotel rooms in the resort cities and in Indio. In 1983, about 13 percent of the valley's supply of hotel rooms was located in the resort cities of Rancho Mirage, Indian Wells and Palm Desert. By 1991, this share had grown to about 29 percent of the valley's total rooms, due to the rapid resort hotel industry growth in this area. Of all new hotel rooms added during this period, about 57 percent were captured by the resort cities. By contrast, Indio's supply of hotel rooms represented about 9 percent of the valley's supply in 1983; this share has dropped to 8 percent as of December 1991. Of all new hotel rooms constructed during this period, about 5 percent were captured by Indio.

Characteristics of hotel room supply. Hotel data for Indio reveals lower average room rates and generally smaller hotels in comparison with the Coachella Valley. Based on a

TABLE 6-1
CITY OF INDIO GENERAL PLAN PROGRAM
HOTEL TRENDS IN THE COACHELLA VALLEY: 1983 - 1991

Year	Coachella Valley			Resort Cities \1			City of Indio		
	Number of Rooms	Number of Rooms Added	Annual Growth Rate	Number of Rooms	Number of Rooms Added	Annual Growth Rate	Number of Rooms	Number of Rooms Added	Annual Growth Rate
1983	10,294	N/A	N/A	1,353	N/A	N/A	961	N/A	N/A
1984	10,655	361	3.5%	1,552	199	14.7%	961	0	0.0%
1985	11,315	660	6.2%	1,552	0	0.0%	961	0	0.0%
1986	12,097	782	6.9%	2,018	466	30.0%	1,086	125	13.0%
1987	13,790	1,693	14.0%	3,276	1258	62.3%	1,086	0	0.0%
1988	14,350	560	4.1%	3,688	412	12.6%	1,196	110	10.1%
1989	15,423	1,073	7.5%	4,044	356	9.7%	1,271	75	6.3%
1990	15,398	(25)	-0.2%	4,044	0	0.0%	1,246	-25	-2.0%
1991	15,952	554	3.6%	4,556	512	12.7%	1,246	0	0.0%
TOTAL	15,952	5,658	5.6%	4,556	3,203	16.4%	1,246	285	3.3%

1\ Rancho Mirage, Indian Wells, Palm Desert

Source: Stanley R. Hoffinan Associates, Inc.
Wheeler's Desert Letter

TABLE 6-2
CITY OF INDIO GENERAL PLAN PROGRAM
DISTRIBUTION OF HOTEL GROWTH IN THE COACHELLA VALLEY: 1983 - 1991

Year	Coachella Valley			Resort Cities			City of Indio		
	Number of Rooms	Share of Annual Growth	Share of Total Rooms	Number of Rooms	Share of Annual Growth	Share of Total Rooms	Number of Rooms	Share of Annual Growth	Share of Total Rooms
1983	10,294	1.00	1.00	1,353	N/A	0.13	961	N/A	0.09
1984	10,655	1.00	1.00	1,552	0.55	0.15	961	0.00	0.09
1985	11,315	1.00	1.00	1,552	0.00	0.14	961	0.00	0.08
1986	12,097	1.00	1.00	2,018	0.60	0.17	1,086	0.16	0.09
1987	13,790	1.00	1.00	3,276	0.74	0.24	1,086	0.00	0.08
1988	14,350	1.00	1.00	3,688	0.74	0.26	1,196	0.20	0.08
1989	15,423	1.00	1.00	4,044	0.33	0.26	1,271	0.07	0.08
1990	15,398	1.00	1.00	4,044	0.00	0.26	1,246	1.00	0.08
1991	15,952	1.00	1.00	4,556	0.92	0.29	1,246	0.00	0.08
TOTAL	15,952	1.00	1.00	4,556	0.57	0.29	1,246	0.05	0.08

Source: Stanley R. Hoffinan Associates, Inc.
Wheeler's Desert Letter

survey conducted by Pannel Kerr Forster, average annual room rates in the Coachella Valley for 1990 were as follows:

Under 100 Rooms	\$61
100 to 300 Rooms	\$99
Over 300 Rooms	\$148

Based on a 1991 survey of the four hotels in Indio that belong to the Palm Springs Desert Resorts Convention and Visitor's Bureau, the average annual room rate in Indio is about \$59. This is Based on a sample of 358 out of 1,246 hotel/motel rooms in Indio, including the Best Western Date Tree Motor Hotel, Comfort Inn, Indio Travelodge, and Rodeway Inn. Since Indio has not been previously been perceived as a resort hotel market, its lodging market has typically been oriented toward business or through travellers and other non-destination lodging.

Table 6-3 shows trends in the average number of rooms per hotel for the Coachella Valley, resort cities and Indio. For the Coachella Valley, the average number of rooms per hotel has risen from 40 in 1983 to 57 in 1991, an increase of about 43 percent. In the resort cities, this average size has increased from 75 rooms per hotel to 169 rooms per hotel over the same period, an increase of 125 percent. In Indio, the increase in average size has been smaller, from 42 rooms in 1983 to 48 rooms in 1991, an increase of 14 percent.

Growth of hotel demand. The growth in demand for hotel rooms in the Coachella Valley can be projected based on the growth in the number of visitors to the valley. During the decade form 1970 to 1980, tourism grew at an average annual rate of 4.6 percent. During the period from 1980 to 1990, tourism grew at a slightly faster pace, 4.9 percent per year. The annual average hotel occupancy for 1990 was 57.0 percent, according to Pannell Kerr Forster, up from 56.9 percent in 1989 and 54.4 percent in 1988. The annual average occupancy in the Coachella Valley is lower than for other competitive resort areas, due to the extreme seasonality of the Coachella Valley tourism industry.

In summary, the trends indicate that Indio's hotel market has not historically responded to the growth in tourism in the valley during the 1980s. This is evidenced by Indio's slower growth in rooms added, its continued trend toward hotels and motels with fewer rooms and room rates below the average. As tourism increased over the 1980s at an average annual rate of 4.9 percent per year, the hotel industry responded by adding rooms at an average annual rate of 5.6 percent per year, while maintaining stable

TABLE 6-3
CITY OF INDIO GENERAL PLAN PROGRAM
TRENDS IN HOTEL SIZE IN THE COACHELLA VALLEY: 1983 - 1991

Year	Coachella Valley			Resort Cities			City of Indio		
	Number of Rooms	Number of Hotels	Avg. Number of Rooms Per Hotel	Number of Rooms	Number of Hotels	Avg. Number of Rooms Per Hotel	Number of Rooms	Number of Hotels	Avg. Number of Rooms Per Hotel
1983	10,294	258	40	1,353	18	75	961	23	42
1984	10,655	259	41	1,552	18	86	961	23	42
1985	11,315	262	43	1,552	19	82	961	23	42
1986	12,097	266	45	2,018	21	96	1,086	24	45
1987	13,790	270	51	3,276	24	137	1,086	24	45
1988	14,350	275	52	3,688	26	142	1,196	26	46
1989	15,423	277	56	4,044	26	156	1,271	26	49
1990	15,398	278	55	4,044	26	156	1,246	26	48
1991	15,952	279	57	4,556	27	169	1,246	26	48

Source: Stanley R. Hoffman Associates, Inc.
Wheeler's Desert Letter

occupancy rates. Indio added hotel rooms at an average annual rate of only 3.3 percent during this same period, for a total 285 new rooms since 1983. The four hotels surveyed in Indio represent the competitive portion of its hotel market, and comprise only about 30 percent of Indio's total room supply. None of the hotels are destination resorts, but are most likely supported by a combination of both business and tourism related demand. Indio's hotel supply does not have amenities or operators of a caliber which would allow them to compete with resorts in the western valley.

6.2 Projection of Hotel Demand in Indio

Hotel demand was projected for the Coachella Valley and Indio through the year 2020 based on assumptions about Indio's ability to capture a share of the industry's growth during that period.

Coachella Valley Projected Demand

The annual hotel room demand is first projected for the entire Coachella Valley based on past trends and information from other supporting sources. As presented in Table 6-4, the annual growth in rooms over the 1983-1991 period averaged 707 rooms per year. For the period, 1991-2000, 515 rooms per year, or 73 percent of the historic average was projected. This projection is based two criteria: 1) on the assumption that growth in the resort market will slow somewhat in the 1990's, and 2) on projections in the market study for Pacific Indio, prepared by THK Associates, Inc. After the year 2000, the annual growth rate is projected to decrease to 354 rooms per year until 2010, or 50 percent of the historic rate. From 2010 through 2020, the growth in rooms per year is projected at 283, or 40 percent of the historic rate.

TABLE 6-4
CITY OF INDIO GENERAL PLAN UPDATE
PROJECTION OF DEMAND FOR HOTEL ROOMS: INDIO

Period	Coachella Valley		City of Indio			
	Demand for Rooms		Capture of Growth		Hotel Rooms Captured	
	Annual	Total	Low	High	Low	High
1983-1991	707	15,952	7.8%	8.0%	1,246	1,246
1991-2000	515	21,102	8.0%	10.0%	1,658	1,761
2000-2010	354	24,642	8.0%	11.0%	1,941	2,150
2010-2020	283	27,472	8.0%	12.0%	2,168	2,490

Source: Stanley R. Hoffman Associates, Inc.

These projections result in a growth of hotel/motel rooms from 15,952 in 1991 to 27,472 by 2020 for the entire Coachella Valley. This represents a 72 percent increase in the supply of hotel/motel rooms over the entire period, and an average annual growth rate of 3.2 percent from 1991 to 2000, declining to an annual growth rate of 1.1 percent from 2010 to 2020.

Indio's Projected Capture of Valley-Wide Demand

Historically, Indio has represented about 8 to 9 percent of the total hotel rooms in the Coachella Valley, with none of these rooms in the resort hotel category. Over the period 1983 to 1991, Indio's capture rate of the growth increment averaged 5 percent, although in individual years when the facilities were opened, the rates were higher.

In the projection period, it is assumed that Indio will implement a comprehensive economic strategy which emphasizes development in the resort facilities category. The polo fields and Shadow Hills can particularly increase Indio's capture.

As presented in Table 6-4, Indio is projected to capture a growth increment of hotel room demand ranging from 8 percent to 12 percent under the enhanced scenario, and 7.8 percent stabilizing at 8 percent under the low-trend scenario.

These assumptions result in a projected range of hotel room demand in Indio of 2,168 to 2,490 by the year 2020. This represents an increase of 922 to 1,244 rooms, or 74 to almost 100 percent over the base year, 1991. This growth projection is assumed to satisfy both increased resort demand and business travellers, particularly along Interstate 10.

CHAPTER 7

HOUSING PROJECTIONS AND JOBS/HOUSING RELATIONSHIPS

As part of the General Plan process, it is viewed as essential to understand the relationship between projected jobs and housing units in Indio. This relationship is most commonly analyzed in terms of a jobs/housing balance. This chapter provides a housing projection for Indio, the East Valley and the Coachella Valley. Then, the projected housing units are compared with projected jobs from Chapter 3 to project the future jobs/housing balance for each respective area.

7.1 Housing Trends and Projections

Housing projections for the Coachella Valley and its subareas are undertaken for housing units, households, and seasonal or vacant units. Households represent year-round occupants, either working or retired. Seasonal or vacant units are estimated as the difference between total housing units and total households, as reported by the State Department of Finance. A summary of housing trends and projections is presented in Table 7-1.

Coachella Valley

Housing units projections for the Coachella Valley are based on CVAG's projection of households for 2010 as found in the April, 1991 report Regional Housing Needs Analysis. The number of households was then used to estimate the number of seasonal and total dwelling units by applying year-round occupancy rates. Occupancy rates for the valley are projected based on occupancy trends since 1980. Table 7-2 shows the projected housing units for the Coachella Valley.

There are currently about 140,500 housing units in the valley, of which 89,800 are occupied by year-round households. This represents an average permanent resident occupancy of about 63.9 percent. In 1983, there were about 99,200 housing units, with permanent occupancy of about 62.4 percent. Over the nine year period, growth in the housing stock has averaged about 3.9 percent per year. By 2010, the number of housing units is projected to increase to 239,900, at an average annual growth of about 3.0 percent per year. During this period, the trend toward permanent occupancy is projected to continue, with year-round occupancy increasing to 67.1 percent. By 2020, the number of dwelling units is projected to increase to 258,500, at an average annual growth rate of 0.75 percent. By 2020, year-round occupancy is projected to reach about 67.9 percent.

**TABLE 7-1
CITY OF INDIO GENERAL PLAN
HOUSING TRENDS AND PROJECTIONS**

	DEPARTMENT OF FINANCE												EST.	ENHANCED	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	2010	2020
HOUSING UNITS															
Coachella Valley	92,608	95,293	97,587	99,248	102,316	106,771	110,371	114,560	117,340	121,225	127,465	131,729	140,508	239,903	258,515
East Coachella Valley	17,080	18,006	18,733	19,269	20,028	20,648	21,847	22,424	22,996	24,092	24,713	26,344	27,294	59,608	64,233
City of Indio	8,768	9,438	9,758	10,143	10,556	10,952	11,909	12,151	12,504	13,124	12,819	13,935	14,850	38,357	41,333
YEAR-ROUND HOUSEHOLDS															
Coachella Valley	57,929	59,814	61,323	61,947	63,687	64,765	66,297	69,399	72,453	75,261	82,624	85,663	89,756	161,090	175,361
East Coachella Valley	13,783	14,472	15,185	15,657	16,363	17,065	17,556	18,381	19,246	20,087	20,120	21,065	22,614	49,467	51,229
City of Indio	6,626	7,105	7,480	7,821	8,284	8,771	9,127	9,674	10,365	10,950	10,402	11,086	12,077	29,918	31,413
ESTIMATED SEASONAL AND VACANT UNITS															
Coachella Valley	34,679	35,480	36,264	37,301	38,629	42,006	44,075	45,160	44,887	45,963	44,841	46,066	50,752	78,813	83,155
East Coachella Valley	3,297	3,534	3,548	3,612	3,665	3,583	4,291	4,043	3,750	4,005	4,593	5,279	4,681	10,141	13,004
City of Indio	2,142	2,333	2,278	2,322	2,272	2,181	2,782	2,477	2,139	2,174	2,417	2,849	2,773	8,439	9,920
ESTIMATED PERMANENT OCCUPANCY RATE															
Coachella Valley	62.6%	62.8%	62.8%	62.4%	62.2%	60.7%	60.1%	60.6%	61.7%	62.1%	64.8%	65.0%	63.9%	67.1%	67.8%
East Coachella Valley	80.7%	80.4%	81.1%	81.3%	81.7%	82.6%	80.4%	82.0%	83.7%	83.4%	81.4%	80.0%	82.9%	83.0%	79.8%
City of Indio	75.6%	75.3%	76.7%	77.1%	78.5%	80.1%	76.6%	79.6%	82.9%	83.4%	81.1%	79.6%	81.3%	78.0%	76.0%

Source: Stanley R. Hoffman Associates, Inc.
California State Department of Finance
Coachella Valley Association of Governments

TABLE 7-2
CITY OF INDIO GENERAL PLAN PROGRAM
HOUSING UNIT PROJECTIONS FOR THE COACHELLA VALLEY

Housing Type	1983	1992	2010	2020
Occupied Units	61,900	89,800	161,000	175,400
Seasonal and Vacant Units	<u>37,300</u>	<u>50,800</u>	<u>78,800</u>	<u>83,200</u>
Total Housing Units	99,200	140,500	239,900	258,500
Year-Round Occupancy	62.4%	63.9%	67.1%	67.9%

*Source: Stanley R. Hoffman Associates, Inc.
California State Department of Finance*

East Coachella Valley

Housing projections for the East Coachella Valley are based partly on CVAG's Regional Housing Needs report projection and partly on Indio's estimated housing unit count for 2010. Table 7-3 presents housing trends and projections for the east valley area.

TABLE 7-3
CITY OF INDIO GENERAL PLAN PROGRAM
HOUSING UNIT PROJECTIONS FOR THE EAST COACHELLA VALLEY

Housing Type	1983	1992	2010	2020
Occupied Units	15,700	22,600	49,500	51,200
Seasonal and Vacant Units	<u>3,600</u>	<u>4,700</u>	<u>10,100</u>	<u>13,000</u>
Total Housing Units	19,300	27,300	59,600	64,200
Year-Round Occupancy	81.3%	82.9%	83.0%	79.8%

Source: Stanley R. Hoffman Associates, Inc.

In 1983, the east valley area had about 19,300 housing units, of which 15,700--or about 81.3 percent--were occupied by permanent, year-round residents. By 1992, the total number of housing units in the east valley rose to about 27,300, of which 22,600--or 82.9 percent--were occupied by permanent, year-round residents. Over this period, a slight rise in permanent occupancy took place, driven by new residential development in the area. By 2010, the east valley is projected to have about 59,600 housing units, with about 83.0 percent year round occupancy. By 2020, however, year-round occupancy in this part of the Coachella Valley is projected to decline, under the assumption that new resort communities, such as the Del Webb project, and areas such as south Indio, will be developed. About 64,200 housing units are projected to 2020, with about 51,200 year-round households.

Currently, the East Coachella Valley has about 19.4 percent of the valley's entire housing stock. By 2010, this share is projected to increase to about 24.8 percent, and by 2020, this share is projected to remain at about 24.8 percent.

City of Indio

Table 7-4 shows housing trends and projections for the City of Indio. The City currently has about 14,900 housing units, 12,000 of which are occupied on a year-round basis, for an average permanent occupancy rate of 81.3 percent. In 1983, the City had about 10,100 housing units, and an average permanent occupancy rate of 77.1 percent. Over the period from 1983 to 1992, the City has experienced the addition of about 4,200 housing units for permanent occupancy, compared to about 500 additional seasonal units. The trend toward year-round residency is indicative of the City's balanced character. However, the City has stated that it intends to pursue development of resort communities is projected to lower the permanent occupancy rate.

**TABLE 7-4
CITY OF INDIO GENERAL PLAN PROGRAM
HOUSING UNIT PROJECTIONS FOR THE CITY OF INDIO**

Housing Type	1983	1992	2010	2020
Occupied Units	7,800	12,000	29,900	31,400
Seasonal and Vacant Units	<u>2,300</u>	<u>2,800</u>	<u>8,400</u>	<u>9,900</u>
Total Housing Units	10,100	14,900	38,600	41,300
Year-Round Occupancy	77.1%	81.3%	78.0%	76.0%

Source: Stanley R. Hoffman Associates, Inc.

Housing projections for Indio are based on the City's estimate of about 38,600 units by 2010, as reported to SCAG in 1991. Based on assumptions about the increase in seasonal occupancy, about 78 percent of the housing stock in 2010--or 29,900 housing units--is projected to be occupied on a year-round basis. By 2020, Indio's housing stock is projected to increase to about 41,300 units, with a permanent occupancy rate of about 76 percent.

7.2 Jobs/Housing Relationships

Based on jobs projections from Chapter 3 and the housing projections presented above, jobs/housing relationships are projected. This section summarizes these relationships for the Coachella Valley, the East Coachella Valley and the City of Indio. Two measures

are used to measure jobs/housing relationships: the ratio of jobs to housing units, and the ratio of jobs to households. The jobs/housing unit ratio includes seasonal housing units, and tends to artificially lower the jobs/housing ratio. The jobs/household ratio compares permanent households in the study area with the number of jobs, providing an indication of the economic balance in the valley.

Coachella Valley

Table 7-5 presents detailed housing and job data for the Coachella Valley, East Coachella Valley and Indio. In 1983, the jobs/housing unit ratio for the Coachella Valley was at 0.58. This ratio is lower than most regions because of the number of seasonal housing units. Including only year-round households--households which typically have one or more workers--the jobs/household ratio was actually higher, at 0.93. By 1992, the jobs/housing unit ratio had increased to 0.63; the jobs/household ratio had also increased, to 0.99. This increase in jobs relative to housing indicates that the Coachella Valley is diversifying and becoming more balanced as it moves toward a year-round economy. By 2010, the jobs/housing unit ratio is projected at 0.64, while the jobs/household ratio is projected at 0.95. By 2020, these ratios are projected at 0.66 and 0.98, respectively. These ratios are lower than the present jobs/household ratio, estimated at 0.99; however, the Coachella Valley is projected to continue to move toward a balance between jobs and housing--even with significant residential development projected.

East Coachella Valley

As shown in Table 7-5, the East Coachella Valley is currently at a jobs/housing unit ratio of 0.67, and a jobs/household ratio of 0.81. In 1983, the jobs/housing unit ratio was significantly higher, at 0.81, while the jobs/household ratio was at 1.00. The decline in these jobs/housing ratios is evidence that residential development has outpaced employment-related development over the last decade. However, with enhanced employment projections, the east valley is projected to increase its jobs/housing unit ratio to 0.64 by 2010. Likewise, the jobs/household ratio is also projected to increase, to 0.93 by 2010. By 2020, these ratios are projected to increase further, to 0.87 and 1.09, respectively. The projected increase in jobs/housing ratios indicates that although significant levels of residential development are projected in the east valley, employment growth is likely to outpace population growth in this area over the next three decades.

TABLE 7-5
CITY OF INDIO GENERAL PLAN PROGRAM
JOBS/HOUSING RELATIONSHIPS UNDER ENHANCED CONDITIONS

INDICATOR	1983	1992	2010	2020
OCCUPIED HOUSING UNITS				
Coachella Valley	61,947	89,756	161,090	175,361
East Coachella Valley	15,657	22,614	49,467	51,229
City of Indio	7,821	12,077	29,918	31,413
SEASONAL AND VACANT UNITS				
Coachella Valley	37,301	50,752	78,813	83,155
East Coachella Valley	3,612	4,681	10,141	13,004
City of Indio	2,322	2,773	8,439	9,920
TOTAL DWELLING UNITS				
Coachella Valley	99,248	140,508	239,903	258,515
East Coachella Valley	19,269	27,294	59,608	64,233
City of Indio \1	10,143	14,850	38,357	41,333
YEAR ROUND OCCUPANCY				
Coachella Valley	62.4%	63.9%	67.1%	67.8%
East Coachella Valley	81.3%	82.9%	83.0%	79.8%
City of Indio	77.1%	81.3%	78.0%	76.0%
JOBS				
Coachella Valley	57,578	88,930	152,800	171,300
East Coachella Valley	15,624	18,289	45,900	55,800
City of Indio	10,167	12,370	27,300	32,200
JOBS/YEAR-ROUND HOUSEHOLD RATIO				
Coachella Valley	0.93	0.99	0.95	0.98
East Coachella Valley	1.00	0.81	0.93	1.09
City of Indio	1.30	1.02	0.91	1.03
JOBS/TOTAL HOUSING UNIT RATIO				
Coachella Valley	0.58	0.63	0.64	0.66
East Coachella Valley	0.81	0.67	0.77	0.87
City of Indio	1.00	0.83	0.71	0.78

1\ 2010 Housing units as reported to SCAG by City of Indio as "most likely scenario."

Source: Stanley R. Hoffman Associates, Inc.

City of Indio

The jobs/housing unit ratio in Indio is currently at 0.83, down from 1.00 in 1983. The jobs/household ratio is currently at 1.02, down from 1.30 in 1983. These measures indicate that residential development has significantly outpaced non-residential development since 1983. However, even with this shift, Indio is still relatively balanced between jobs and households. By 2010, however, with an increase in housing units to over two and a half times the current number, Indio's jobs/household ratio is projected to decrease to 0.91. By 2020, however, with continued growth projected for jobs in and a slowdown for residential development in Indio, the jobs/household ratio is projected to return to 1.03, slightly above the current ratio. The overall jobs/housing unit ratio is projected to stabilize at 0.78 in 2020, lower due to the projected addition of significant levels of seasonal housing in Indio.

FISCAL IMPACT ANALYSIS

CITY OF INDIO

GENERAL PLAN UPDATE

Prepared For:

The City of Indio
100 Civic Center Mall
Indio, California 92202

June 9, 1993

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CHAPTER 1

INTRODUCTION

1.1 Background

This report presents the fiscal analysis of the City of Indio's General Plan Preferred Alternative. The report provides basic information about City revenue sources and operation and maintenance costs. Also, the fiscal analysis reflects adjustments to the current budget based on recent and anticipated State cutbacks, and projects the fiscal impacts of new residential and non-residential growth. The fiscal analysis is presented for the General Plan at buildout, assumed to be approximately the year 2020.

The fiscal analysis focuses on recurring public revenues and costs, net of enterprise revenues and costs. Enterprise functions are assumed to operate on a self-supporting basis. The revenues include General Fund and selected Operating Fund revenues. In summary, these cover property, sales, and other taxes, licenses and permits, fines and penalties, revenues from other agencies, charges for current services, cost reimbursements, and traffic safety funds, and gas tax revenues.

The public costs cover the General Fund categories of general government, police, fire, development services, engineering, public services, and community services.

1.2 Methodology

The 1992-93 fiscal year has been used as the base year budget. Adjustments to the base year have been made to reflect both State budgetary impacts and the estimated retail sales leakage to other portions of the Coachella Valley.

The projections are made using a computer based fiscal model that combines the land use alternative, public revenue and cost assumptions, and market valuation assumptions. The fiscal projections are presented for the following four geographic areas of the City: Indio Ranchos, Shadow Hills, the combined Date Capital and Indio Centre Redevelopment Areas, and Remainder of City. The projections are presented in 1993 constant dollars.

1.3 Sources of Data

This report utilizes the following sources of information to project revenues and costs.

- Preferred land use alternative as provided by The Chambers Group and the City of Indio planning staff.
- City revenue and cost estimates based on interviews with City staff and analysis of the budget for the fiscal year 1992-93.
- Data regarding the Redevelopment Areas as provided by the City of Indio Redevelopment staff.
- Demographic information, as provided by the Department of Finance and State Board of Equalization.
- Market data based on field research and Urban Decision Systems (UDS) as well as retail sales data for the City of Indio from Hinderliter, de Llamas & Associates.

1.4 Report Overview

Chapter 2 presents the summary and findings of the fiscal analysis for the Preferred Alternative. Chapter 3 presents a description of the buildout land uses and infrastructure assumptions, and Chapter 4 provides an analysis of current budget trends affecting the City of Indio. Chapter 5 lists the revenue and cost assumptions used in the fiscal model. Chapter 6 presents the detailed fiscal analysis of the General Plan for the Preferred Alternative. Appendix A contains the list of persons and agencies contacted in preparing this report.

CHAPTER 2

SUMMARY AND FINDINGS

2.1 Summary of Fiscal Analysis and Major Economic Issues

This chapter presents the summary and findings for the City of Indio's General Plan fiscal analysis. The following section presents a summary of the fiscal projections for the Indio General Plan Update. For this study, analysis is presented for the preferred land use plan which begins with the adjusted base year budget for 1992-93. The base year budget assumes that recurring revenues are \$12.12 million and recurring costs are \$12.86 million for a net recurring deficit of about \$742.2 thousand, reflecting current and anticipated State budgetary cutbacks, and retail sales leakage to other portions of the Coachella Valley.

Fiscal impacts analyzed under the preferred land use scenario are applied and added to the adjusted base year budget. A description of how the base year budget was derived is presented in Chapter 4.

Table 2-1 presents a summary of the fiscal impacts to the City of Indio in 1993 constant dollars. The total projected revenue increment added to the existing adjusted base year is estimated at ~~\$37.99~~^{37.99} million and the projected cost increment is estimated at \$33.88 million. When added to the base year budget, total recurring revenues are estimated at ¹⁰\$49.65 million and total costs are estimated at \$46.74 million for an annual recurring surplus estimated at ^{2.91}\$2.91 million. Based on the estimated recurring revenues and costs, the revenue/cost ratio for the total City at buildout is estimated to be 1.06.

TABLE 2-1
CITY OF INDIO GENERAL PLAN
SUMMARY OF BUILDOUT REVENUES AND COSTS
PREFERRED ALTERNATIVE
(In Constant 1993 Dollars)

	Adjusted Base Year Budget	Total Increment	Total City At Build Out
Recurring Revenues			
<i>General Fund</i>			
Property Tax	\$1,158,367	\$5,994,607	\$7,152,974
Sales and Use Tax	3,510,272	10,717,526	14,227,798
Transient Occupancy Tax	580,000	2,529,450	3,109,450
Franchises	406,850	1,455,744	1,862,594
Business Licenses	340,500	774,108	1,114,608
Real Property Transfer Tax	50,000	286,428	336,428
Utility User Fees	1,630,000	4,625,479	6,255,479
Animal Licenses	8,000	28,628	36,628
Building Permits	250,000	NA	250,000
Other Licenses and Permits	41,500	148,509	190,009
Motor Vehicle In-Lieu	1,320,968	4,727,118	6,048,086
Homeowners Property Tax Relief	40,000	NA	40,000
Miscellaneous	2,750	NA	2,750
Zoning and Subdivision Fee	55,000	NA	55,000
Environmental Impact Reports	14,000	NA	14,000
Plan and Map Check Fee	80,000	NA	80,000
Photocopying and Duplicating	24,820	88,819	113,639
State Highway Maintenance	5,500	NA	5,500
Police and Fire Service Fee	87,300	312,405	399,705
Ambulance Fees	140,000	500,994	640,994
Street Inspection Fees	30,000	107,356	137,356
Other Charges and Fees	43,400	155,308	198,708
Municipal Code Violations	30,000	107,356	137,356
Interest Earned	100,000	305,539	405,539
Rents and Concessions	55,000	196,819	251,819
Sales of Property	2,500	NA	2,500
Utility In-lieu	746,900	2,672,801	3,419,701
RDA Reimbursements	275,000	NA	275,000
Other Revenues	213,534	764,137	977,671
Operating Revenues: Other			
Fines and Forfeitures (Traffic Safety)	50,000	178,926	228,926
Section 2107 and 2107.5 Gasoline Tax	316,788	1,133,634	1,450,422
Section 2106 Gasoline Tax	60,000	214,712	274,712
Section 2105 Gasoline Tax ¹	0	0	0
Operating Fund Transfers	449,000	NA	NA
Total Recurring Revenues	\$12,117,949	\$38,026,402	\$49,695,351
Recurring Costs			
<i>General Fund</i>			
General Government	\$1,766,222	\$4,607,456	\$6,373,678
Elections/Promotions & Publicity	127,935	457,819	585,754
Surety and Insurance	480,611	1,719,879	2,200,490
Sundry	368,486	1,318,637	1,687,123
Police Protection	4,541,789	16,252,909	20,794,698
Fire Protection	2,770,412	1,860,000	4,630,412
Community Development	685,000	490,258	1,175,258
Animal Control	98,656	353,043	451,699
Disaster Preparedness	2,200	0	2,200
Ambulance Service	122,842	0	122,842
Public Services	1,184,092	3,237,243	4,421,335
Engineering Services	337,147	130,742	467,889
Parks	287,043	3,172,974	3,460,017
Parkways/Median Maintenance	9,850	0	9,850
Senior Citizen Center	77,901	278,771	356,672
Total Recurring Costs	\$12,860,186	\$33,879,729	\$46,739,915
Annual Recurring Surplus/(Deficit)	(\$742,237)	\$4,146,673	\$2,955,436
Revenue/Cost Ratio	0.94	1.12	1.06

Source: Stanley R. Hoffman Associates, Inc.

06/08/93

Note: 1. Section 2105 gas tax revenues are allocated 100% to capital improvements.

Major economic issues associated with the land use plans for the City of Indio General Plan Update include the following:

- Development of residential neighborhoods that provide a mix of housing opportunities, including those communities that offer seasonal and retirement housing.
- With the development of additional residential, neighborhoods should include development of supportive retail uses including community and neighborhood retail centers.
- Development of resort potential with lodging and recreational amenities
- Additional retail potential, particularly regional retail, along the Interstate 10 Corridor is an opportunity to enhance the City's competitive edge.
- Another retail corridor in the Coachella Valley has traditionally been the Highway 111 Corridor. Businesses located along this corridor need to be enhanced and strengthened.
- Redevelopment activities need to continue recycling the older, urban core areas, particularly the downtown civic center.
- Continuing to strengthen the industrial and office base through enterprise zone incentives and other locational advantages.

2.2 Land Use Summary

Table 2-2 presents a summary of the incremental residential and non-residential land uses for the preferred alternative.

Residential. A total of 46,461 incremental new dwelling units are projected for the City of Indio. When added to the existing number of dwelling units, estimated at 14,958, a total of 61,419 dwelling units are projected at the buildout of the City of Indio General Plan. For the purposes of the fiscal analysis, the residential land uses have been divided into five density types and are as follows:

TABLE 2-2
CITY OF INDIO GENERAL PLAN
SUMMARY OF INCREMENTAL BUILDOUT LAND USES

Land Use Category	1993 - 2020
<u>Residential (units)</u>	
Country/Hillside	235
Equestrian	4,000
Low density	26,638
Medium density	12,558
High density	3,030

Total Incremental Dwelling Units	46,461
Existing Dwelling Units	14,958
Total Dwelling Units	61,419
<u>Non-residential (sq. ft.)</u>	
Regional Commercial	2,506,270
Community/Neighborhood Commercial	3,759,405

Subtotal	6,265,675
Office/Business Park	1,359,072
Industrial/Manufacturing	4,565,088
Hotel (rooms)	1,320

*Source: Stanley R. Hoffman Associates, Inc.
The Chambers Group*

- Equestrian/Country Estates
- Hillside Estates
- Low Density Residential
- Medium Density Residential
- High Density Residential

Non-residential. Non-residential uses include retail commercial, office commercial, industrial, manufacturing and hotels. Non-residential uses, exclusive of the retail commercial category, are projected based on the City of Indio's General Plan Economic Study, February 21, 1992, prepared by Stanley R. Hoffman Associates.

Retail square footage was determined by using the current estimated taxable retail sales per capita as applied to the buildout population of the City. As shown in Table 2-2, the new retail square footage is estimated at 6.27 million square feet. The retail square footage has been allocated among two commercial types; regional and community/neighborhood. Other non-residential uses include office commercial with 1.36 million square feet, and industrial at 4.56 million square feet. An estimated 1,320 new hotel rooms are also projected as part of the fiscal analysis for the City of Indio.

CHAPTER 3

GENERAL PLAN LAND USES AND INFRASTRUCTURE

3.1 Geographic Sub-areas

This chapter presents an overview of the land use, market and economic factors used in the City of Indio General Plan Update.

Land use statistics have been provided by The Chambers Group and the City of Indio planning staff for the General Plan buildout of the City. Land uses presented are for the preferred land use alternative. Analysis in this report is presented for buildout of the general plan; no phasing of land uses is assumed. General Plan buildout is estimated for the year 2020.

In addition to the citywide fiscal analysis, land uses for the preferred plan are grouped into four sub-areas for fiscal analysis. The following is a brief description of each of these sub-areas:

- Shadow Hills - The Shadow Hills area lies to the north of Interstate 10, and is slated for annexation to the City of Indio. Shadow Hills is largely undeveloped.
- Indio Ranchos - The recently annexed Indio Ranchos area lies south of the Civic Center and extends to the City's southern border. Indio Ranchos currently contains several recreation and resort facilities, including the polo grounds, and has the potential to continue developing as a residential resort area.
- Redevelopment Areas - Indio has two redevelopment project areas, the Indio Centre Project and the Date Capital Project. These areas are grouped because of the specific revenue and cost implications of redevelopment.
- Remainder of City - The remainder of the City is grouped into a single fiscal analysis area and includes those portions of the City not covered by the Shadow Hills, Indio Ranchos and Redevelopment Areas.

The following section presents a description of the land uses outlined in the preferred alternative land use plan.

3.2 Preferred General Plan Alternative

Residential

As shown in Table 3-1, the residential land uses for the Indio General Plan have been grouped into five categories which represent various density ranges. A total of 46,461 incremental dwelling units are assumed to be added at the buildout. The residential units include country/hillside estates with 235 units; equestrian estates with 4,000 units; low density residential with 26,638 units; medium density residential with 12,558 units; and high density residential with 3,030 units.

Non-residential

Land use methodology for the fiscal analysis employs a market-based interpretation of the Preferred Alternative Plan non-residential land uses. That is, not all land uses are assumed to develop, but are adjusted to reflect projected absorption and a larger population and labor force in 2020.

As presented in Table 3-2, the land uses have been broken down by the estimated buildout acres of land by land use category according to the sub-areas of the City which include Shadow Hills, Indio Ranchos, Redevelopment Areas and Remainder of City. The area of Shadow Hills comprises the largest share of the retail allocation and office allocation with a respective 39.9 percent and 53.2 percent. The redevelopment areas capture the largest industrial acreage with an overall 63.2 percent. Hotel rooms are allocated on the same ratio as the retail commercial land uses.

TABLE 3-1
CITY OF INDIO GENERAL PLAN
DWELLING UNITS AND SQUARE FEET BY GEOGRAPHIC SUB-AREA

Dwelling Unit and Square Footage Allocations					
	Indio Ranchos	Shadow Hills	Redev. Areas	Remainder of City	Total
<u>Residential (units)</u>					
Country/Hillside	235	0	0	0	235
Equestrian	2,300	1,700	0	0	4,000
Low Density	0	23,589	0	3,049	26,638
Medium Density	0	4,823	0	7,735	12,558
High Density	0	608	1,378	1,044	3,030
Total	2,535	30,720	1,378	11,828	46,461
<u>Retail Commercial (square feet)</u>					
Regional	0	2,325,568	180,702	0	2,506,270
Community/Neighborhood	52,514	1,745,124	863,821	1,097,947	3,759,405
Subtotal	52,514	4,070,692	1,044,522	1,097,947	6,265,675
<u>Office Commercial (square feet)</u>					
Commercial Office	0	71,273	26,823	93,678	191,774
Business Park	0	810,182	126,784	230,332	1,167,298
Subtotal	0	881,454	153,607	324,010	1,359,072
<u>Industrial (square feet)</u>					
Industrial Park	0	0	1,436,770	363,796	1,800,566
Manufacturing	0	0	1,446,790	1,317,732	2,764,522
Subtotal	0	0	2,883,561	1,681,527	4,565,088
<u>Hotel (rooms)</u>	15	739	260	306	1,320

Source: Stanley R. Hoffman Associates, Inc.

TABLE 3-2
CITY OF INDIO GENERAL PLAN
NON-RESIDENTIAL LAND USES BY GEOGRAPHIC SUB-AREA

	Acres					Percentage Allocations				
	Indio Ranchos	Shadow Hills	RDA's	Remainder of City	Total	Indio Ranchos	Shadow Hills	RDA's	Remainder of City	Total
<u>Residential</u>										
Country/Hillside	327.9	3,122.6	0.0	0.0	3,450.5	9.5%	90.5%	0.0%	0.0%	100.0%
Equestrian	1,424.2	666.9	0.0	0.0	2,091.1	68.1%	31.9%	0.0%	0.0%	100.0%
Low Density	0.0	5,454.8	480.2	2,548.3	8,483.2	0.0%	64.3%	5.7%	30.0%	100.0%
Medium Density	0.0	516.8	137.3	1,119.9	1,774.0	0.0%	29.1%	7.7%	63.1%	100.0%
High Density	0.0	50.6	199.9	87.1	337.5	0.0%	15.0%	59.2%	25.8%	100.0%
Total	1,752.2	9,811.7	817.3	3,755.3	16,136.4					
<u>Retail Commercial</u>										
Regional	0.0	312.8	39.0	0.0	351.8	0.0%	88.9%	11.1%	0.0%	100.0%
Community	0.0	169.7	226.9	242.8	639.4	1.4%	27.2%	35.3%	36.1%	100.0%
Neighborhood ¹	19.0	200.2	253.5	247.3	720.1					
Subtotal	19.0	682.7	519.4	490.2	1,711.3	1.1%	39.9%	30.4%	28.6%	100.0%
<u>Office Commercial</u>										
Commercial Office	0.0	23.7	28.1	78.7	130.5	0.0%	18.2%	21.5%	60.3%	100.0%
Business Park	0.0	468.0	132.6	193.4	794.0	0.0%	58.9%	16.7%	24.4%	100.0%
Subtotal	0.0	491.7	160.7	272.1	924.5	0.0%	53.2%	17.4%	29.4%	100.0%
<u>Industrial</u>										
Industrial Park	0.0	0.0	167.8	42.5	210.3	0.0%	0.0%	79.8%	20.2%	100.0%
Manufacturing	0.0	0.0	168.9	153.9	322.8	0.0%	0.0%	52.3%	47.7%	100.0%
Subtotal	0.0	0.0	336.7	196.4	533.1	0.0%	0.0%	63.2%	36.8%	100.0%
<u>Hotel²</u>										

Note: 1. Includes the commercial categories of Village Core, SP Adam 34, Del Webb, Service and Downtown.

2. Hotel rooms have been allocated using the ratio of retail land uses.

Source: Stanley R. Hoffman Associates, Inc.

As shown in Table 3-1, retail commercial land uses are estimated at approximately 6.27 million square feet at build out of the General Plan. The retail uses are further broken down into 2.51 million square feet of regional commercial and 3.76 million square feet of community/neighborhood commercial based on existing retail center data.

Table 3-3 presents the methodology used to project new retail square footage for the City of Indio. Total taxable retail sales for 1992 has been divided by the 1992 population to estimate the taxable retail sales per capita, estimated at \$6,840. The per capita amount of \$6,840 is then multiplied by the new incremental population to derive the total incremental taxable retail sales, estimated at \$1.03 billion. The total incremental taxable retail sales has reduced by ten percent to allow for retail sales absorption by the existing retail centers. The incremental taxable sales of \$927.32 million is divided by an estimated taxable sales per square foot of \$148 to determine the incremental retail square footage. The total incremental retail square footage is next allocated by center type, 2.51 million square feet for regional centers and 3.76 million square feet for community/neighborhood centers.

The 40.0 percent allocation of retail uses to regional retail has been determined on the basis of local shopping center data as presented in Table 3-4. Existing regional at 1.45 million square feet comprises about 42.1 percent of the retail square footage, while neighborhood and community retail square footage account for about 57.9 percent.

Office, industrial and hotel land uses are estimated based on the estimated acreage demand outlined in the City of Indio General Plan Economic Study, February 21, 1992.

**TABLE 3-3
CITY OF INDIO GENERAL PLAN
POST-RECESSIONARY TAXABLE SALES**

1992 Existing Taxable Sales

Taxable retail sales per capita	\$6,840
Population	40,378
 Total taxable retail sales	 \$276,181,435
Total taxable non-retail sales	\$46,035,005
Total taxable sales	<u>\$322,216,440</u>

2020 Buildout Taxable Sales

Taxable retail sales per capita	\$6,840
Population	191,017
 Total taxable retail sales	 \$1,306,536,954

Incremental Taxable Sales

Taxable retail sales per capita	\$6,840
Population	150,639
 Total incremental taxable retail sales	 \$1,030,355,519
Less 10% allocated to existing retail square feet	103,035,552
Net Incremental taxable sales	927,319,967
Sales @ \$148 per square foot	\$148
Total projected incremental square feet	6,265,675

Allocation by Retail Center Type

Incremental Square Feet	6,265,675
 Regional Center percentage	 40.00%
Regional square footage	2,506,270
 Community/Neighborhood Center allocation	 60.00%
Community/Neighborhood Center square footage	3,759,405

Note: 1. Based on retail sales per square foot averages from the Urban Land Institutes, Dollar and Cents of Shopping Centers, 1990.

Source: Stanley R. Hoffman Associates, Inc.

**TABLE 3-4
CITY OF INDIO
GENERAL PLAN UPDATE
LOCAL AREA SHOPPING CENTER DATA¹**

Center Name	Square Feet	City	Center Type
Coachella Plaza	163,000	Coachella	Community
Coachella Shopping Center	122,000	Coachella	Community
Village at Indian Wells	103,000	Indian Wells	Community
Fed-Mart Center ²	89,000	Indio	Community
Tyselling Shopping Center ²	54,232	Indio	Community
Town and Country Center	199,000	Indio	Community
The Village Square	99,000	Indio	Community
Indio Plaza	134,000	Indio	Community
Indio Fashion Mall	279,000	Indio	Community
Sav-On Shopping Center	38,000	Indio	Neighborhood
La Quinta Plaza Shopping Center	114,000	La Quinta	Community
La Quinta Village Shopping Center	115,000	La Quinta	Community
Plaza La Quinta	114,000	La Quinta	Community
One Eleven La Quinta Center	599,000	La Quinta	Regional
Palm Desert Country Club Shopping Center	143,000	Palm Desert	Community
Indian Wells Village	99,000	Palm Desert	Community
The Paseo Premier	13,000	Palm Desert	Neighborhood
Jensen's Shopping Center	75,000	Palm Desert	Neighborhood
Palms to Pines Shopping Center	44,000	Palm Desert	Neighborhood
Palm Desert Town Center	852,000	Palm Desert	Regional
Total Square Feet	3,448,232		
Total Indio Square Feet ³	892,232		
Indio as a Percent of Study Area	25.88%		

Total Study Area by Center Type

Community/Neighborhood	1,997,232	57.9%
Regional	1,451,000	42.1%
Total	3,448,232	100.0%

- Note: 1. Local area is defined as a 10.0 mile radius from the approximate centerpoint of Indio.
2. Leasing areas for the Tyselling center is estimated using an FAR of 0.25 and has been categorized as community level shopping center.
3. Total square feet does not include small individual retailers.*

*Source: Stanley R. Hoffman Associates, Inc.
Urban Decision Systems, Inc.*

As presented in Table 3-5, the General Plan Economic Study projects non-residential acreage demand for the City of Indio.

Floor area ratios (FAR's), as provided by the Chambers Group, are then applied to the office and industrial acres to yield square feet. As shown in Table 3-5, the current projections show about 1.36 million square feet of office and 4.57 million square feet of industrial. The number of hotel rooms is estimated at 1,320 when using a factor of 40 rooms per acre.

Office commercial land uses are projected at approximately 1.36 million square feet at build out of the General Plan. As previously presented in Table 3-1, according to General Plan land use designations, most of this development is projected to be business park--about 1.17 million square feet--while the remaining 191.8 thousand square feet are project for commercial office uses.

Also, as shown in Table 3-1, industrial land uses are projected at 4.57 million square feet. About 1.80 million square feet of industrial land is intended for industrial park uses, while about 2.76 million square feet is intended for manufacturing uses.

New lodging in the City of Indio is estimated to total 1,320 rooms. Much of this is anticipated to be along the I-10 corridor in Shadow Hills and in the Indio Ranchos sub-area.

3.3 Infrastructure

This section presents a summary of the infrastructure needs associated with the Indio General Plan update.

**TABLE 3-5
CITY OF INDIO GENERAL PLAN
NON-RESIDENTIAL DEMANDS AT BUILDOUT¹**

Category	Projected Demand Acres	FAR	Current Projections
Office	78.0	0.40	1,359,072
Industrial/Manufacturing	262.0	0.40	4,565,088
Hotel ²	33.0	40	1,320

*Notes: 1. The current buildout projections are based on the General Plan Economic Study, City of Indio, 2/21/92, prepared by Stanley R. Hoffman Associates, Inc.
2. Hotel density is assumed at 40 rooms per acre.*

Source: Stanley R. Hoffman Associates, Inc.

Since no detailed information is currently available on these facilities, the fiscal model projects costs based on a combination of the existing infrastructure per developed acres in the City, and new future public service standards. New infrastructure planned for the General Plan Update is comprised of lane miles of streets including arterial streets and lane miles of local streets. Additional infrastructure includes new curbs, new signalized intersections and maintained medians, and street lighting.

New parks are estimated using a ratio of 3.45 acres per 1,000 of new population. The existing park acreage in the City of Indio is estimated at 52.0 acres, or the equivalent of about 1.3 acres per 1,000 population. The ratio of new parks at 3.45 acres per 1,000 population is used to raise the overall City standard of park acreage to 3.0 acres per 1,000 population by buildout.

Based on discussions with the Indio Fire Department, two new fire stations plus one relocated station will be necessary to adequately service the buildout of the General Plan. These stations are anticipated to be located in the Shadow Hills portion of the City. However, for purposes of the fiscal analysis, it is assumed that eighty percent of the fire protection efforts have been allocated to Shadow Hills, while the remaining twenty percent is proportioned to the Remainder of City. It is assumed that sprinklering of future land uses will be required which reduces the future need for an estimated two fire stations at a substantial cost savings to the City of Indio.

CHAPTER 4

ANALYSIS OF INDIO BUDGET TRENDS

4.1 Purpose of Analysis

This chapter presents an overview of the budget trends currently facing the City of Indio. The purpose of this analysis is to provide an adjusted budget for long-term projections which accurately reflects current conditions based on anticipated state budget adjustments and cutbacks.

4.2 City of Indio Adjusted Budget

Fiscal impacts from the buildout of the general plan are added to the adjusted base year revenues and costs to achieve a buildout fiscal analysis for the City of Indio. The following is a summary of the operating revenue and cost adjustments. These adjustments have been made in coordination with City staff to determine the adjusted base year numbers.

Recurring Revenues

The current revenue budget is adjusted downward by \$872,806 for the purposes of the fiscal analysis, as shown in Table 4-1. The largest estimated decreases in operating revenues occurs in the categories of property tax, sales and use tax, and off track betting. Other smaller decreases occur in the categories of grant revenue and POST reimbursements.

Property Tax. Property tax revenues for the adjusted base year are projected to decrease by approximately \$463,806 thousand, or from \$1.62 million to an estimated \$1.16 million.

TABLE 4-1
CITY OF INDIO GENERAL PLAN
SUMMARY OF BASE YEAR REVENUES

Revenue Category	Adopted 1992-93 Budget	Changes to Base Year	Adjusted Base Year
<u>OPERATING REVENUES: GENERAL FUND</u>			
<u>Taxes</u>			
Property Taxes	\$1,622,173	(\$463,806)	\$1,158,367
Sales and Use Tax	3,760,272	(250,000)	3,510,272
Transient Occupancy Tax	580,000		580,000
Franchises	406,850		406,850
Business Licenses	340,500		340,500
Real Property Transfer Tax	50,000		50,000
Utility User Fees	1,630,000		1,630,000
Subtotal	\$8,389,795		\$7,675,989
<u>Licenses and Permits</u>			
Animal Licenses	\$8,000		\$8,000
Building Permits	250,000		250,000
Other Licenses and Permits	41,500		41,500
Subtotal	\$299,500		\$299,500
<u>Intergovernmental Revenues</u>			
Motor Vehicle In Lieu	\$1,320,968		\$1,320,968
Homeowners Property Tax Relief	40,000		40,000
Trailer Coach In Lieu	0		0
Cigarette Tax	0		0
Post Reimbursement	25,000	(25,000)	0
Grant Revenue	39,000	(39,000)	0
Miscellaneous	2,750		2,750
Subtotal	\$1,427,718		\$1,363,718
<u>Charges for Current Services</u>			
Zoning & Subdivision Fee	\$55,000		\$55,000
Environmental Impact Reports	14,000		14,000
Plan & Map Check Fee	80,000		80,000
Photocopy & Duplicating	24,820		24,820
State Highway Maintenance	5,500		5,500
Police & Fire Service Fee	87,300		87,300
Ambulance Fees	140,000		140,000
Street Inspection Fees	30,000		30,000
Off Track Betting	95,000	(95,000)	0
Other Charges & Fees	43,400		43,400
Subtotal	\$575,020		\$480,020
<u>Fines and Forfeitures</u>			
Municipal Code Violations	\$30,000		\$30,000

TABLE 4-1
CITY OF INDIO GENERAL PLAN
SUMMARY OF BASE YEAR REVENUES

Revenue Category	Adopted 1992-93 Budget	Changes to Base Year	Adjusted Base Year
<u>Use of Money and Property</u>			
Interest Earned	\$100,000		\$100,000
Rents and Concessions	55,000		55,000
Subtotal	\$155,000		\$155,000
<u>Miscellaneous</u>			
Sales of Property	\$2,500		\$2,500
Utility in-Lieu	746,900		746,900
Redevelopment Agency Reimbursement	275,000		275,000
Other	213,534		213,534
Subtotal	\$1,237,934		\$1,237,934
Total General Fund Operating Revenues	\$12,114,967		\$11,242,161
 <u>OPERATING REVENUES: OTHER</u>			
<u>Traffic Safety Fund</u>			
Fines & forfeitures	\$50,000		\$50,000
<u>State Gas Tax</u>			
Section 2107.5	\$6,000		\$6,000
Section 2107	310,788		310,788
Section 2106	60,000		60,000
Section 2105	—		0
	\$376,788		\$376,788
<u>Other Transfers In</u>			
Transfer In-Oasis Palms	\$29,000		\$29,000
Transfer In-Mobile Equipment	400,000		400,000
Transfer In-Land & Light	20,000		20,000
Subtotal	\$449,000		\$449,000
Total Other Operating Revenues	\$875,788		\$875,788
Total Operating Revenues	\$12,990,755	(\$872,806)	\$12,117,949

Source: Stanley R. Hoffman Associates, Inc.
City of Indio

This adjustment is the result of a decrease of \$463.8 thousand due to anticipated state budgetary cutbacks of property tax for fiscal year 1993/94.

Sales and Use Tax. Sales and use tax revenues to the City of Indio for the adjusted base year are anticipated to decrease by \$250.0 thousand. This estimated decrease is due to the potential for sales tax "leakage" to other surrounding communities offering additional shopping opportunities.

P.O.S.T. Reimbursement. Revenues from the Police Officers Standards Training are no longer received by the City. A loss of \$25,000 has been reflected in the adjusted base year budget.

Grant Revenue. Grants from the Federal Government and the State of California, which cities such as Indio must apply for, are frequently subvented to cities in a lump sum and only for specified period of time. Therefore, since the funding source cannot be relied on continuously, a loss of \$39,000 of Traffic Safety grant revenue is reflected in the adjusted base year budget.

Off Track Betting. As Off Track Betting is anticipated to move out of the City of Indio and onto the neighboring Indian reservation, the City will experience a loss of approximately \$95,000. This reduction is also reflected in the adjusted base year budget.

Recurring Costs

As shown in Table 4-2, the total adjustments in recurring costs result in a net decrease of approximately \$164.4 thousand from the adopted 1992-93 budget to the adjusted base year budget. The only decrease occurs in the category of Public Safety. Traffic Safety

TABLE 4-2
CITY OF INDIO GENERAL PLAN
SUMMARY OF BASE YEAR COSTS

Revenue Category	Adopted 1992-93 Budget	Changes to Base Year	Adjusted Base Year
OPERATING EXPENDITURES			
<u>General Government</u>			
<i>Departmental</i>			
City Council	\$37,415		\$37,415
City Manger	158,839		158,839
City Clerk	107,236		107,236
Finance	532,189		532,189
Data Processing	79,383		79,383
City Treasurer	3,010		3,010
City Attorney	305,000		305,000
Human Resources	141,818		141,818
Building & Grounds	209,800		209,800
Redevelopment/Special Proj.	191,532		191,532
Subtotal	\$1,766,222		\$1,766,222
<i>Non-Departmental</i>			
Elections	\$435		\$435
Promotion & Publicity	127,500		127,500
Surety & Insurance	480,611		480,611
Sundry	368,486		368,486
Subtotal	\$977,032		\$977,032
<u>Public Safety</u>			
Police	\$4,541,789		\$4,541,789
Fire	2,770,412		2,770,412
Animal Control	98,656		98,656
Traffic Safety Grant	164,433	(164,433)	0
Disaster Preparedness	2,200		2,200
Underground Storage Grant	0		0
Ambulance Service	122,842		122,842
Total	\$7,700,332		\$7,535,899
<u>Community Development</u>			
	\$685,000		\$685,000
	\$685,000		\$685,000
<u>Public Services</u>			
Administration	\$92,700		\$92,700
Street Cleaning	157,124		157,124
Street Lighting	157,375		157,375
Street Maintenance	419,021		419,021
Street Traffic Control	167,740		167,740
Yard & Shops	190,132		190,132
Total	\$1,184,092		\$1,184,092
<u>Engineering Services</u>			
	\$337,147		\$337,147
Total	\$337,147		\$337,147
<u>Parks, Recreation & Cultural</u>			
Parks	\$287,043		\$287,043
Parkways	9,850		9,850
Senior Citizens Center	77,901		77,901
Total	\$374,794		\$374,794
Total Expenditures	\$13,024,619	(164,433)	\$12,860,186

Source: Stanley R. Hoffman Associates, Inc.
City of Indio

Grant revenues represent a decrease of \$164.4 thousand from the adopted 1992-93 budget to the adjusted base year budget.

Overall Net Budget Adjustments

The overall net budget adjustments result in a base year adjusted budget with a starting deficit of \$742,237. This is based on adjusted revenues of \$12.117 million and adjusted costs of \$12.860 million.

CHAPTER 5

REVENUE AND COST ASSUMPTIONS

5.1 Introduction

Fiscal assumptions used to project recurring revenues and costs are based on existing relationships between the City of Indio's operating budget and the City's current population, employment, and development. Population in the City of Indio as of January 1, 1992 is estimated at 40,378 based on data provided by the Department of Finance. Employment in the City is estimated at 10,541 based on employment data provided by the Southern California Association of Governments (SCAG).

5.2 Revenues

Operating fund revenues include taxes, licenses and permits, fines and penalties, revenue from other agencies, charges for current services, interest income and miscellaneous revenues. Revenue assumptions used in the fiscal analysis are summarized in Table 5-1.

Property Tax. For purposes of this report, three allocations are used for the following areas of the City: Indio Ranchos, Shadow Hills and remainder of the City. The Indio Ranchos and Shadow Hills portions have been broken out separately because of their significance as recent or anticipated annexations. This information was provided by City staff and by Hinderliter, deLlamas & Associates. Property tax revenues to the general fund are projected only for the property located outside of the redevelopment project areas. The following are the existing proportions of the basic 1.0 percent levy estimated to be allocated to the City of Indio.

**TABLE 5-1
CITY OF INDIO GENERAL PLAN
REVENUE ASSUMPTIONS**

Revenue Source	Fund	Adjusted Budget	Projection Basis	Projection Method and/or Assumptions	Projection Factor
Property Tax	General	\$1,486,291	Assessed valuation	Valuation assumptions: Equestrian/country estates - \$287,500 Hillside estates - \$160,000 Low density - \$120,000 Medium density - \$100,000 High density - \$80,700 Retail and Office \$80/bldg sf Industrial/Manufacturing \$50/bldg sf Unsecured valuation is \$20 per square foot for non-residential. Hotel - \$85,000 per room secured and \$15,000 unsecured.	City allocation is equal to the following share of the basic 1% levy. City's share is 21.6% Indio Ranchos share is 13.9% Shadow Hills share is 12.0%
Sales and Use Tax	General	\$3,510,272	Taxable sales from retail sales	Regional retail - \$160/sf Community retail - \$140/sf	1% of taxable retail sales times 1.12 use tax
Transient Occupancy Tax	General	\$580,000	Hotel room receipts Market data	\$75.00/room night @ 70% occupancy	10% of gross room receipts
Franchise Fees	General	\$406,850	Population	Per Capita	\$10.08 per capita
Business License Tax	General	\$340,500	New businesses	Per employee	\$32.30 per employee
Real Estate Transfer Tax	General	\$50,000	Property turnover	Residential properties assumed to turnover at a rate of once every 10 years. Non-residential properties assumed to turnover at a rate of once every 14 years.	\$1.10 per \$1000 of sales price City of Indio's share equal to \$0.55
Utility User Fees	General	\$1,630,000	Pop. and Employment	Per capita and employee	\$32 per capita and employee
Licenses and Permits:					
Animal Licenses	General	\$8,000	Population	Per capita	\$ 20 per capita
Building Permits	General	\$250,000	Not projected	Assumed to be steady state	Case study analysis
Other Licenses and Permits	General	\$41,500	Population	Per capita	\$1.03 per capita
Motor Vehicle In-Lieu	General	\$1,320,968	Population	Per capita	\$32.72 per capita
Charges for Current Services:					
Police and Fire Service Fee	General	\$87,300	Population	Per capita	\$2.16 per capita
Ambulance Fees	General	\$140,000	Population	Per capita	\$3.47 per capita
Other Charges and Fees	General	\$103,220	Population	Per capita	\$2.56 per capita
Municipal Code Violations	General	\$30,000	Population	Per capita	\$0.74 per capita
Rents and Concessions	General	\$55,000	Population	Per capita	\$1.36 per capita
Other Revenues	General	\$213,534	Population	Per capita	\$5.29 per capita
Interest Income	General	\$100,000	Average annual rate	Current interest earnings are 2.5% of total general and operating fund revenues	2.5% of projected operating revenues
Traffic Safety	Operating	\$50,000	Population	Per capita	\$1.24 per capita
State Gasoline Tax - 2105	Operating	\$0	Population	Not projected	Assumed to be allocated 100% to capital projects
State Gasoline Tax - 2106	Operating	\$60,000	Population	Per capita	\$1.49 per capita
State Gasoline Tax - 2107 and 2107.5	Operating	\$316,788	Population	Per capita	\$7.84 per capita
Measure A 1/2 cent sales tax	Operating		Percent of Sales Tax	Not projected	Assumed to be allocated 100% to capital projects

Source: Stanley R. Hoffman Associates, Inc.
City of Indio 1992-93 Budget

- Shadow Hills 12.0%
- Indio Ranchos 13.9%
- Remainder of City 21.6%

The fiscal analysis also assumes that an additional property tax adjustment will occur in 1993. As shown in Table 5-2, it is estimated that this cutback will be about 21.7 percent. As a result of this additional reduction, the proportion of the basic levy decreases to 15.4 percent for the remainder of City, 10.0 percent for Indio Ranchos and 8.6 percent for Shadow Hills. These are the proportions used in the fiscal analysis to project future property tax revenues.

Property tax revenues are based on the assessed valuation of the new development and includes estimates of secured valuation for residential land uses and secured and unsecured valuation for non-residential land uses. Residential valuations are estimated on a per unit basis. As shown in Table 5-3, a weighted average of units for existing developments in the City of Indio and the neighboring Coachella Valley have been calculated. Valuations for new residential units in the City of Indio are as follows:

Equestrian/Country estates	\$287,500
Hillside estates	\$160,000
Low density residential	\$120,000
Medium density residential	\$100,000
High density residential	\$ 80,700

Non-residential valuation in the City of Indio is estimated at \$10.00 per square foot for land for the categories of retail and office. Land valuation for industrial and manufacturing uses is estimated at \$8.00 per square foot. Building valuation is estimated at \$80.00 per building square foot for community/neighborhood retail, \$80.00 per building square foot for office, and \$50.00 per building square foot for industrial/manufacturing. Unsecured valuation is estimated at \$20 per building square foot for all retail, office and

**TABLE 5-2
CITY OF INDIO GENERAL PLAN
PROPERTY TAX ADJUSTMENTS**

Area of City	Current Property Tax Amount	Effective Tax After 1992/93 State Cutback 9.0%	Effective Tax After 1993/94 State Cutback ¹ 21.7%
General City	0.21654	0.19705	0.15429
Indio Annexation	0.13982	0.12724	0.09963
Shadow Hills	0.12000	0.10920	0.08550

Note: 1. The 1993/94 state cutback is a worst-case scenario.

*Source: Stanley R. Hoffman Associates, Inc.
City of Indio
Hinderliter, deLlamas & Associates*

**TABLE 5-3
CITY OF INDIO GENERAL PLAN
RESIDENTIAL VALUATIONS**

Project Jurisdiction	Density	Units Sold	Total Units	Average Price	Total Units Valuation	Sold Units Valuation	Fiscal Model Valuation
<u>Country/Hillside Estates</u>							
Indian Wells/La Quinta	4.36	10	23	\$465,000	\$10,695,000	\$4,650,000	
Indian Wells/La Quinta	4.75	0	16	196,000	3,136,000	0	
Indian Wells/La Quinta	5.01	22	33	233,900	7,718,700	5,145,800	
Indian Wells/La Quinta	5.12	38	47	269,500	12,666,500	10,241,000	
Weighted Average		70	119		\$287,531	\$286,240	\$287,500
<u>Equestrian Estates</u>							
Indian Wells/La Quinta	5.38	130	133	\$165,100	\$21,958,300	\$21,463,000	
Indio/Coachella	5.45	23	38	156,100	5,931,800	3,590,300	
Indian Wells/La Quinta	5.45	128	150	165,900	24,885,000	21,235,200	
Indian Wells/La Quinta	5.45	6	15	186,550	2,798,250	1,119,300	
Indian Wells/La Quinta	5.58	33	43	272,450	11,715,350	8,990,850	
Indian Wells/La Quinta	5.81	48	64	177,004	11,328,256	8,496,192	
Indian Wells/La Quinta	5.81	39	50	186,525	9,326,250	7,274,475	
Indian Wells/La Quinta	5.81	30	73	249,990	18,249,270	7,499,700	
Indian Wells/La Quinta	5.90	247	289	101,566	29,352,574	25,086,802	
Weighted Average		684	855		\$158,532	\$153,152	\$160,000
<u>Low Density</u>							
Indian Wells/La Quinta	6.05	18	25	\$211,323	\$5,283,075	\$3,803,814	
Indio/Coachella	6.22	22	33	89,000	2,937,000	1,958,000	
Indio/Coachella	6.22	14	19	102,450	1,946,550	1,434,300	
Indio/Coachella	6.22	20	37	123,525	4,570,425	2,470,500	
Indio/Coachella	6.22	16	20	130,790	2,615,800	2,092,640	
Indio/Coachella	6.22	19	20	181,666	3,633,320	3,451,654	
Indio/Coachella	6.70	42	50	104,990	5,249,500	4,409,580	
Indio/Coachella	6.70	47	47	123,335	5,796,745	5,796,745	
Indio/Coachella	6.70	15	33	132,700	4,379,100	1,990,500	
Indio/Coachella	6.70	136	167	142,525	23,801,675	19,383,400	
Indio/Coachella	7.26	58	58	87,450	5,072,100	5,072,100	
Indio/Coachella	7.26	103	103	94,990	9,783,970	9,783,970	
Indio/Coachella	7.26	38	38	98,450	3,741,100	3,741,100	
Indio/Coachella	7.26	18	49	107,735	5,279,015	1,939,230	
Indio/Coachella	7.26	24	27	116,011	3,132,297	2,784,264	
Indio/Coachella	7.26	72	76	117,500	8,930,000	8,460,000	
Indio/Coachella	7.26	52	61	125,900	7,679,900	6,546,800	
Weighted Average		714	863		\$120,315	\$119,214	\$120,000
<u>Medium Density</u>							
Indian Wells/La Quinta	9.08	23	53	\$139,900	7,414,700	3,217,700	
Weighted Average ¹		23	53		\$139,900	\$139,900	\$100,000
<u>High Density</u>							
Indio/Coachella	10.89	49	68	\$80,656	5,484,608	3,952,144	
Weighted Average		49	68		\$80,656	\$80,656	\$80,700

Note: 1. The weighted average valuation used in the fiscal model for medium density reflects the mid-point of the low and high density categories.

Source: Stanley R. Hoffman Associates, Inc.

industrial/manufacturing uses. Hotel valuation is estimated at \$85.0 thousand per room for secured and \$15.0 thousand per room for unsecured valuation.

Sales and Use Tax. Indio receives a sales tax of one percent of sales of most goods. Major sales tax generators include retail establishments, auto dealers, industrial and manufacturing activities and hotels. Annual taxable sales from retail development is estimated at \$160 per square foot for regional commercial and \$140 per square foot for community/neighborhood commercial. Industrial/manufacturing uses are estimated to generate approximately \$6.00 per square foot of non-retail taxable sales annually.

Use tax, distributed by the State, is estimated at 12.0 percent of total sales tax, based on information from the California State Board of Equalization.

Transient Occupancy Tax. Currently, the City of Indio charges a rate of 10.0 percent on gross room receipts. An average room rate of \$75.00 per night and occupancy rate of 70.0 percent is assumed to reflect improving economic conditions. As shown in Table 5-4, current data on existing hotels and motels located in the City of Indio as provided by the American Automobile Association (AAA) estimate an average room rate of about \$58.00 and an occupancy rate of 65.0 percent.

Utility User Fees. Revenues from utility user fees are projected using a factor of \$32.00 per capita and employee.

Franchise Fees. Revenues from this category are estimated at \$10.08 per capita, based on the existing budget of \$406.8 thousand and the current City population of 40,378.

TABLE 5-4
CITY OF INDIO GENERAL PLAN
AVERAGE ROOM RATES

Facility	Number of Rooms	Average Room Rate
Best Western Date Tree Motor Hotel	120	\$60.00
Comfort Inn	63	\$61.50
Indio Travelodge	50	\$60.00
Roadway Inn at Big America	125	\$60.50
Royal Plaza Inn	99	\$48.50
Total	457	
Weighted Average		\$57.85

*Source: Stanley R. Hoffman Associates Inc.
1992 AAA Tour Book*

Business License Tax. Business license revenues are estimated at \$32.30 per employee, based on employment in the City of Indio of 10,541 and receipts of \$340.5 thousand. Business license revenues are assumed to increase in proportion with new employment.

Property Transfer Tax. Sales of real property are taxed by the County of Riverside at a rate of \$1.10 per \$1,000 of transferred property value. The City of Indio's share is equal to \$0.55. Turnover for residential properties is estimated at 10.0 percent per year, or each dwelling unit sells on the average of once every ten years. For non-residential properties, turnover is estimated at 7.0 percent per year, or each non-residential property turns over on the average of once every 14.3 years.

Licenses and Permits. Revenues from this category include animal licenses, mobile home park permits, planning and fire permits, and underground storage permits. Animal licenses are projected at \$0.20 per capita. Other licenses and permits are projected at \$1.03 per capita. The per capita amount is derived by dividing the 1992-93 budget amounts of \$8.0 thousand and \$41.5 thousand respectively by the 1992 population of 40,378.

Fines and Forfeitures. Revenues from municipal code violations for the 1992-93 budget year are estimated at \$30.0 thousand. Using the 1992 population of 40,378, the per capita revenue factor is projected at \$0.74.

Other Revenues. Other revenues is projected at \$5.29 per capita. This factor is based on revenues of \$213.5 thousand and the current Indio population of 40,378 as provided by the Department of Finance.

Franchise Fees. Franchise fees are estimated at \$10.08 per capita, based on the budget amount of \$406.9 thousand divided by the total population of the City 40,378.

Motor Vehicle In-Lieu. Revenues from Motor Vehicle In-Lieu for 1992-93 are estimated at \$32.72 per capita based on information from the State Controller's Office.

Other Charges and Fees. Other charges and fees are generated from photocopying and duplicating fees, state highway maintenance, street inspection fees, and other miscellaneous fees charged by the City of Indio. Revenues from this category are projected at \$2.56 per capita, based on charges and fees of \$103.2 thousand and the existing population of 40,378.

Ambulance Service Fees. Fees from paramedic services are projected at \$3.47 per capita based on a population of 40,378 and ambulance service revenues of \$140.0 thousand.

Traffic Safety Fund. Revenues from traffic violations within the City are estimated at \$1.24 per capita. This factor is estimated by dividing the budget amount of \$50.0 thousand by the City of Indio population of 40,378.

Gas Tax Revenues. In addition to general fund revenues, Gas Tax Fund revenues are projected, and include revenues from Sections 2106, 2107 and 2107.5. Section 2106 gas taxes are projected at \$1.49 per capita. Section 2107 and 2107.5 revenues are estimated at \$7.84 per capita. Revenue estimates for gas taxes are projected using data from the State Controller's Office. Gas tax Revenues from Section 2105 are not projected as part of Indio's operating budget. Revenues from Section 2105 are assumed to be allocated entirely to capital improvements.

Interest Earnings. The City of Indio's projected interest earnings for fiscal year 1992-1993 is estimated at \$100.0 thousand. The City of Indio is estimated to receive an average return of 2.5 percent on invested fund balances. This does not reflect the day-to-day yields of individual investments, but rather an annual average of total revenues.

5.3 Costs

Recurring costs projected in the Indio fiscal analysis include police, fire, public services, Senior Center, general government, non-departmental, animal control, and disaster preparedness. A summary of the cost factors is presented in Table 5-5.

Police Protection. Police protection is currently provided to the City by approximately 44 sworn officers. Based on conversations with the City of Indio Police Department, the existing ratio of officers to population is approximately 1.1 sworn officers per 1,000 population. The police department would like to increase the ratio to 1.4 officers per 1,000 population. From fiscal year 1991-92 to fiscal year 1992-93 the police department has experienced a drop of approximately 5 officer positions.

Projections for police costs in this analysis are estimated at \$112.48 per capita based on analysis of the 1992-93 budget of \$4.54 million and the existing City of Indio population.

Fire Protection. Currently the City of Indio provides fire protection services to its residents from existing stations. Costs for operations and maintenance of future fire stations in the City are estimated at \$930,000 per station. It is estimated that two new fire stations plus one relocated station will be needed to serve the new development in the City. For purposes of this fiscal analysis, net new operations and maintenance costs for two new fire stations are projected for the Shadow Hills area. Cost allocations for fire

**TABLE 5-5
CITY OF INDIO GENERAL PLAN
COST ASSUMPTIONS**

Cost Category	Fund	Adjusted Budget	Projection Basis	Projection Method and/or Assumptions	Projection Factor
General Government	General	\$2,417,358	Citywide overhead factor	Calculated as a percent of department line costs	15.7% of department line costs
Elections/Promotions & Publicity	General	\$127,935	Population	Per capita	\$3.17 per capita
Surety & Insurance	General	\$480,611	Population	Per capita	\$11.91 per capita
Sundry	General	\$368,486	Population	Per capita	\$9.13 per capita
<i>Public Safety:</i>					
Police Protection	General	\$4,541,789	Population	Per capita	\$112.48 per capita
Fire Protection	General	\$2,770,412	New development	Based on new station, additional personnel and equipment needs	Case study analysis Cost allocations estimated at \$930,000 per fire station
Animal Control	General	\$98,656	Population	Per capita	\$2.44 per capita
Disaster Preparedness	General	\$2,200	Population	Not projected	N/A
<i>Public Services¹:</i>	General	\$1,184,092	Developed acres	New developed acre	\$314.46 per new developed acre
Administration	General	\$92,700	% of Public Services	Calculated as % of new public service costs	As % of Public Services: street lighting; street traffic control; and street maintenance
Street Cleaning	General	\$157,124	New curb miles	New curb miles projected based on new roads, cost based on existing inventory of 191 curb miles	\$823 per curb mile
Street Lighting	General	\$157,375	New street lights	New street lights projected as a function of new roads	\$14 per light fixture
Street Maintenance	General	\$419,021	New lane miles	New lane miles projected based on traffic analysis report cost based on 226 existing lane miles	\$1,855 per lane mile
Street Traffic Control	General	\$167,740	New signalized intersections	New signalized intersection cost factor based on 21 existing signalized intersections	\$7,988 per signalized intersection
Yard and Shops	General	\$190,132	Population	Per capita Estimated using a 50% marginal cost increase	\$2.35 per capita
Engineering Services	General	\$337,147	Developed acres	New developed acres	\$12.70 per new developed acre
Parks	General	\$287,043	New parks	New park acres New parks are projected at 3.45 acres per 1,000 population	\$6,365 per acre
Parkways/Median Maintenance	General	\$9,850	New parkways	Per square foot Cost estimates based on existing maintained medians of 51,836 square feet	\$0.19 per square foot
Senior Citizens Center	General	\$77,901	Population	Per capita	\$1.93 per capita
Community Development Dept.	General	\$685,000	Population	Per capita Estimated using a 20.0% marginal cost increase	\$3.39 per capita

Note: 1. Until more definitive infrastructure information is available, a cost per developed acre is used.

Source: Stanley R. Hoffman Associates, Inc.

City of Indio 1992-93 Budget

protection services are estimated to be 80.0 percent for Shadow Hills and 20.0 percent for the remainder of City.

It is assumed that sprinklering of future land uses will be required which reduces the future need for an estimated two fire stations. This will provide a substantial cost savings to the City of Indio.

Public Services. Costs for the department of Public Services include administration, street cleaning, street lighting, street maintenance, street traffic control, yards and shops, engineering services, parks, and parkways. Costs for public services are prepared on a per developed acre basis. The cost per developed acre is estimated at \$314.46. To determine the cost per acre, the Public Services budget of \$1,184,092 is divided by the existing developed acres in the City, approximately 3,765.4.

Parks. The parks program is responsible for the maintenance of most City parks and to supervise the maintenance of all Landscaping and Lighting districts within the City. Maintenance costs of parks are projected at \$6,365 per acre. Park maintenance costs are estimated by dividing the existing number of city maintained park acres, approximately 45.1, into total labor and maintenance costs of \$287,043 thousand.

Engineering Services. Cost allocation to Engineering Services is estimated at a total of \$337.1 thousand. This cost amount is based on analysis of the City budget and discussion with engineering staff at the City. For purposes of this report, engineering service costs are also presented on a per developed acre basis. Engineering service costs are projected using a cost of \$12.70 per developed acre.

Senior Citizen's Center. The Senior Center program includes: senior nutrition and homebound meals, senior surplus food program, meals on wheels, senior home repairs, shared housing and health screening. The cost for the Senior Center is projected at \$1.93 per capita. The cost projection is estimated by dividing the City population of 40,378 into the Senior Center budget amount of \$77.9 thousand.

General Government. General government costs are projected at citywide overhead and include City Council, City Manager, City Clerk, Finance, Personnel and General Government. As shown in Table 5-6, the citywide overhead rate is 15.7 percent of department line costs.

Non-departmental. Non-departmental costs include Elections/Promotion and Publicity, Surety and Insurance, and general purpose expenditures (Sundry). The promotion program is designed to increase trade and commerce and to attract new residents by publicizing the Community's natural, economic and cultural resources and its general attractiveness. Elections refers to the conducting of the City's municipal elections. Elections/Promotions and Publicity is projected at \$3.17 per capita. Surety and Insurance includes the cost of liability insurance premium (ICRMA) and self insurance reserve liability adjuster contract, surety bonds, and general property damage insurance. Surety and Insurance is projected at \$11.91 per capita. Sundry refers to general purpose expenditures and is projected at \$9.13 per capita.

Animal Control. Animal Control, under the direction of the Field Services Division, is responsible for the enforcement of State and Indio City Code violations concerning animals and fowl. This includes impounding of animals, issuing dog licenses and

citations, reducing cruelty to animals, rabies control program, investigations on suspected vicious dogs, and maintaining of records. Costs are projected at \$2.44 per capita based on the City of Indio's population of 40,378.

TABLE 5-6
CITY OF INDIO GENERAL PLAN
GENERAL GOVERNMENT CALCULATION

Total operating expenditures	\$12,990,755
Less general government costs	<u>\$1,766,222</u>
Adjusted operating expenditures	\$11,224,533
General government as a percent of adjusted operating expenditures	15.74%

*Source: Stanley R. Hoffman Associates, Inc.
City of Indio*

CHAPTER 6

FISCAL ANALYSIS OF GENERAL PLAN PREFERRED ALTERNATIVE

6.1 Fiscal Analysis Overview

This chapter presents the detailed fiscal analysis of the General Plan land use preferred alternative. The analysis presented in this section represents the impacts of new development on the existing fiscal conditions and the adjusted base year budget for the City of Indio. Fiscal impacts are also presented by sub-area. Sub-areas consist of specific areas of the City and include Shadow Hills, Indio Ranchos, Redevelopment Areas and Remainder of City. Chapter 3 presents a general description of each sub-area.

Projected fiscal impacts are presented for the general fund and selected operating funds. While property tax increment would also be received by the respective redevelopment areas, these revenues are used primarily for capital expenditures and are not projected in this study.

Table 6-1 presents the recurring revenues and costs at buildout of the General Plan under the Preferred Alternative. As shown, the total projected revenues are estimated at \$49.70 million. This includes the base year budget revenues of \$12.12 million and the projected total increment of \$38.03 million. The total costs are projected at \$46.74 million and include the base year costs of \$12.86 million and incremental costs projected at \$33.88 million. The estimated recurring revenue/cost ratio for the entire City at buildout is projected at 1.06.

TABLE 6-1
CITY OF INDIO GENERAL PLAN
RECURRING REVENUES AND COSTS AT BUILDOUT
PREFERRED ALTERNATIVE
(In Constant 1993 Dollars)

	Adjusted Base Year Budget	Incremental Development					Total City At Build Out
		Indio Ranchos	Shadow Hills	RDA Areas	Remainder of City	Total Increment	
Recurring Revenues							
General Fund							
Property Tax	\$1,158,367	\$398,950	\$3,369,076	\$0	\$2,226,581	\$5,994,607	\$7,152,974
Sales and Use Tax	3,510,272	83,630	6,967,214	1,894,385	1,772,297	10,717,526	14,227,798
Transient Occupancy Tax	580,000	28,744	1,416,109	498,225	586,373	2,529,450	3,109,450
Franchises	406,850	79,428	962,538	43,176	370,602	1,455,744	1,862,594
Business Licenses	340,500	3,635	388,815	204,565	177,094	774,108	1,114,608
Real Property Transfer Tax	50,000	19,453	182,820	18,616	65,538	286,428	336,428
Utility User Fees	1,630,000	252,375	3,058,365	137,188	1,177,550	4,625,479	6,255,479
Animal Licenses	8,000	1,562	18,929	849	7,288	28,628	36,628
Building Permits	250,000	NA	NA	NA	NA	NA	250,000
Other Licenses and Permits	41,500	8,103	98,194	4,405	37,807	148,509	190,009
Motor Vehicle In-Lieu	1,320,968	257,920	3,125,569	140,203	1,203,425	4,727,118	6,048,086
Homeowners Property Tax Relief	40,000	NA	NA	NA	NA	NA	40,000
Miscellaneous	2,750	NA	NA	NA	NA	NA	2,750
Zoning and Subdivision Fee	55,000	NA	NA	NA	NA	NA	55,000
Environmental Impact Reports	14,000	NA	NA	NA	NA	NA	14,000
Plan and Map Check Fee	80,000	NA	NA	NA	NA	NA	80,000
Photocopying and Duplicating	24,820	4,846	58,727	2,634	22,611	88,819	113,639
State Highway Maintenance	5,500	NA	NA	NA	NA	NA	5,500
Police and Fire Service Fee	87,300	17,045	206,562	9,266	79,532	312,405	399,705
Ambulance Fees	140,000	27,335	331,257	14,859	127,543	500,994	640,994
Street Inspection Fees	30,000	5,858	70,984	3,184	27,331	107,356	137,356
Other Charges and Fees	43,400	8,474	102,690	4,606	39,538	155,308	198,708
Municipal Code Violations	30,000	5,858	70,984	3,184	27,331	107,356	137,356
Interest Earned	100,000	12,027	193,115	25,373	75,025	305,539	405,539
Rents and Concessions	55,000	10,739	130,137	5,838	50,106	196,819	251,819
Sales of Property	2,500	NA	NA	NA	NA	NA	2,500
Utility In-lieu	746,900	145,833	1,767,255	79,273	680,439	2,672,801	3,419,700
RDA Reimbursements	275,000	NA	NA	NA	NA	NA	275,000
Other Revenues	213,534	41,693	505,247	22,664	194,533	764,137	977,671
Operating Revenues: Other							
Fines and Forfeitures (Traffic Safety)	50,000	9,763	118,306	5,307	45,551	178,926	228,926
Section 2107 and 2107.5 Gasoline Tax	316,788	61,853	749,558	33,623	288,600	1,133,634	1,450,422
Section 2106 Gasoline Tax	60,000	11,715	141,967	6,368	54,661	214,712	274,712
Section 2105 Gasoline Tax¹	0	0	0	0	0	0	0
Operating Fund Transfers	449,000	NA	NA	NA	NA	NA	NA
Total Recurring Revenues	\$12,117,949	\$1,496,838	\$24,034,417	\$3,157,791	\$9,337,356	\$38,026,402	\$49,695,351
Recurring Costs							
General Fund							
General Government	\$1,766,222	\$268,718	\$3,092,748	\$130,474	\$1,115,516	\$4,607,456	\$6,373,678
Elections/Promotions & Publicity	127,935	24,979	302,710	13,579	116,551	457,819	585,754
Surety and Insurance	480,611	93,840	1,137,183	51,010	437,845	1,719,879	2,200,490
Sundry	368,486	71,947	871,882	39,110	335,697	1,318,637	1,687,123
Police Protection	4,541,789	886,789	10,746,419	482,050	4,137,651	16,252,909	20,794,698
Fire Protection	2,770,412	0	1,488,000	0	372,000	1,860,000	4,630,412
Community Development	685,000	26,749	324,158	14,541	124,809	490,258	1,175,258
Animal Control	98,656	19,263	233,432	10,471	89,877	353,043	451,699
Disaster Preparedness	2,200	NA	NA	NA	NA	0	2,200
Ambulance Service	122,842	NA	NA	NA	NA	0	122,842
Public Services	1,184,092	379,980	2,175,052	111,303	570,908	3,237,243	4,421,335
Engineering Services	337,147	15,346	87,843	4,495	23,057	130,742	467,889
Parks	287,043	173,123	2,097,969	94,108	807,773	3,172,974	3,460,017
Parkways/Median Maintenance	9,850	0	0	0	0	0	9,850
Senior Citizen Center	77,901	15,210	184,323	8,268	70,969	278,771	356,672
Total Recurring Costs	\$12,860,186	\$1,975,946	\$22,741,720	\$959,409	\$8,202,654	\$33,879,729	\$46,739,915
Annual Recurring Surplus/(Deficit)	(\$742,237)	(\$479,108)	\$1,292,697	\$2,198,382	\$1,134,702	\$4,146,673	\$2,955,436
Revenue/Cost Ratio	0.94	0.76	1.06	3.29	1.14	1.12	1.06

Source: Stanley R. Hoffman Associates, Inc.

06/08/93

Note: 1. Section 2105 gas tax revenues are allocated 100% to capital improvements.

6.2 Fiscal Analysis by Geographic Sub-areas

Indio Ranchos. The sub-area of Indio Ranchos is estimated to generate revenues of \$1.50 million and \$1.98 million of costs for a net recurring deficit of \$479.1 thousand. Property taxes account for an estimated \$399.0 thousand or about 26.7 percent of revenues. Additional revenues include motor vehicle in-lieu at \$257.9 thousand and utility user fees at \$252.4 thousand. Very little retail sales development is allocated to the Indio Ranchos sub-area. Major costs associated with this sub-area are police protection at \$886.8 thousand and public services at \$380.0 thousand.

Shadow Hills. The Shadow Hills sub-area is estimated to generate revenues of \$24.03 million and \$22.74 million of costs for a net recurring surplus of \$1.29 million. Sales and use tax, and property taxes combined account for an estimated \$9.41 million or about 43.0 percent of revenues. The major cost associated with this sub-area is police protection, estimated at \$10.75 million, or 47.3 percent of projected total recurring costs.

Redevelopment Areas. The redevelopment sub-areas of the City of Indio are estimated to generate revenues of \$3.16 million and \$959.4 thousand of costs for a net recurring surplus of \$2.20 million. Sales and use tax account for the largest proportion of revenues, estimated at \$1.89 million, or about 60.0 percent of revenues generated in the redevelopment sub-areas. The major costs associated with the redevelopment areas include police protection, projected at \$482.0 thousand, or approximately 50.2 percent of the total cost for the sub-area. The revenue/cost ratio is very positive for this alternative largely because of existing infrastructure and services in the sub-area.

Remainder of City. The Remainder of City sub-area is projected to generate revenues of \$9.34 million and \$8.20 million of costs for a net recurring surplus of \$1.13 million. Sales and use tax and property taxes, combined, account for an estimated \$3.40 million or about 42.8 percent of revenues. Major recurring costs in the Remainder of City sub-area are police protection and general government. Combined, these two cost categories account for an estimated \$5.25 million, or 64.0 percent of total recurring costs. The estimated recurring revenue/cost ratio for this sub-area is estimated at 1.14.

In summary, the fiscal projections are reasonably positive under what are considered to be conservative assumptions regarding development. While the City of Indio has tremendous growth potential, a coordinated, focused economic development program will be necessary to achieve this level of growth.

APPENDIX A

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APPENDIX D

CULTURAL RESOURCES

Appendix D

KNOWN PREHISTORIC ARCHAEOLOGICAL SITES WITHIN THE STUDY AREA

Site Number (trinomial)	Location (USGS Quad)	Site Type	Elevation (feet)	Site Area (m ²)	Site Contents	Site Condition	Level of Investigation* (with MF No.)	Land Ownership	Year Recorded With Updates	Nat. Reg. Status**
CA-Riv-63	Myoma	Habitation	+120	7,854?	ceramics, groundstone, bone, FAR ^A	amateur excavation, graded?	Surveyed (tested?) MF 3380	Private	1953, 1976	ND
CA-Riv-1766	Myoma	Habitation	+42	235,620	lithics, ceramics, FAR, bone, charred plants	agriculture, erosion	Partially surveyed MF 1480	Unknown	1980	ND
CA-Riv-2974	Myoma	Habitation	+70	8,011	lithics, ceramics, FAR, bone	amateur excavation	Recorded	Private	1984	ND
CA-Riv-3867	Myoma	Habitation	+60	982	ceramics, groundstone	intact	Recorded	Private	1990	ND
CA-Riv-4070	Myoma	Habitation	+55	1,276	ceramics, groundstone, <u>human remains</u>	intact	Surveyed MF 3278	Private	1990	ND
CA-Riv-4071	Myoma	Habitation?	+55	236	ceramics (probably part of Riv-4070)	intact	Surveyed MF 3278	Private	1990	ND
CA-Riv-4214	Myoma	Habitation?	+110	6	ceramics, FAR	graded?	Surveyed MF 3380 (tested?)	Private	1990	ND
CA-Riv-4215	Myoma	Habitation?	+100	31	ceramics, FAR	graded?	Surveyed MF 3380 (tested?)	Private	1990	ND
CA-Riv-163	West Berdoo Canyon	Habitation?	+250	Unknown	ceramics, artifact cache	erosion, some human disturbance	Recorded	Unknown	1957, 1976	ND
CA-Riv-164	West Berdoo Canyon	Trail ^B	+400-600	Unknown	lithics, ceramics, rock ring, cairn	some disturbance	Partially surveyed MF 2738	Unknown	1957, 1979, 1980	ND
CA-Riv-1221	West Berdoo Canyon	Habitation	+40	13,666	ceramics, hearth, bedrock slick/mortar	some disturbance	Surveyed MF 860	Unknown	1982	ND
CA-Riv-2207	West Berdoo Canyon	Unknown	+80	330	ceramics	agriculture, erosion	Surveyed MF 1310	Unknown	1977	Pending
CA-Riv-3669 (also CA-Riv-53T)	West Berdoo Canyon	Trail ^B	+160-360	700	lithics	some disturbance	Partially surveyed MF 2738	Private	1989	ND

Appendix D

KNOWN PREHISTORIC ARCHAEOLOGICAL SITES WITHIN THE STUDY AREA

Site Number (trinomial)	Location (USGS Quad)	Site Type	Elevation (feet)	Site Area (m ²)	Site Contents	Site Condition	Level of Investigation* (with MF No.)	Land Ownership	Year Recorded With Updates	Nat. Reg. Status**
CA-Riv-3670	West Berdoo Canyon	Food Processing ?	+230	7	groundstone	intact	Surveyed MF 2738	Private	1989	ND
CA-Riv-3950	West Berdoo Canyon	Habitation	+20	1,532	lithics, ceramics, fishbone	some erosion	Surveyed MF 3055	Private	1990	ND
CA-Riv-3951	West Berdoo Canyon	Habitation	+15	396	lithics, ceramics, groundstone	some erosion	Surveyed MF 3055	Private	1990	ND
CA-Riv-3952	West Berdoo Canyon	Habitation	+20	75	lithics, ceramics, groundstone	some erosion	Surveyed MF 3055	Private	1990	ND
CA-Riv-3953	West Berdoo Canyon	Unknown	+20	1,590	ceramics	some erosion	Surveyed MF 3055	Private	1990	ND
CA-Riv-3954	West Berdoo Canyon	Unknown	+20	1,014	ceramics	some erosion	Surveyed MF 3055	Private	1990	ND
CA-Riv-3955/H	West Berdoo Canyon	Unknown	+20	825	ceramics & historic trash	some erosion	Surveyed MF 3055	Private	1990	ND
CA-Riv-676	Indio	Unknown	-25	2,356	ceramics, lithics	mostly destroyed by road construction	Tested MF 148	Private	1975, 1990	ND
CA-Riv-1539	Indio	Habitation	+40	7,854	lithics, ceramics, bone	offroad vehicles	Surveyed (Wirth SD6E)	Unknown	1976	ND
CA-Riv-1540	Indio	Habitation?	+40	20	ceramics, bone	intact	Surveyed (Wirth SD6E)	Unknown	1976	ND
CA-Riv-2082	Indio	Habitation	+16	829	ceramics, groundstone, bone	agriculture, some erosion	Surveyed MF 1047	Private	1980	ND
CA-Riv-2083	Indio	Habitation	-12	20,836	ceramics, groundstone, bone	agriculture, some erosion	Surveyed MF 1047	Private	1980	ND
CA-Riv-2084	Indio	Habitation	-4	550	ceramics, <u>cremations</u>	agriculture, some erosion	Surveyed MF 1047	Private	1980	ND
CA-Riv-208	Indio	Unknown	-11	471	ceramics	agriculture, some erosion	Surveyed MF 1047	Private		ND

Appendix D

KNOWN PREHISTORIC ARCHAEOLOGICAL SITES WITHIN THE STUDY AREA

Site Number (trinomial)	Location (USGS Quad)	Site Type	Elevation (feet)	Site Area (m ²)	Site Contents	Site Condition	Level of Investigation* (with MF No.)	Land Ownership	Year Recorded With Updates	Nat. Reg. Status**
CA-Riv-3790	Indio	Unknown	+45	12	ceramics	intact	Surveyed MF 2857	Private	1989	ND
CA-Riv-3791	Indio	Unknown	+45	7	ceramics	intact	Surveyed MF 2857	Private	1989	ND
CA-Riv-3792	Indio	Unknown	+50	1	ceramics	intact	Surveyed MF 2857	Private	1989	ND
CA-Riv-3793	Indio	Habitation	+45	62,832	ceramics, bone	intact	Surveyed MF 2857	Private	1989	ND
CA-Riv-1171	La Quinta	Habitation	+40	70,686	lithics, ceramics, groundstone, charred plants	agriculture, development, erosion	Surveyed MF 188	Private	1976	ND
CA-Riv-1178	La Quinta	Habitation	+60	78,540	lithics, ceramics, housepit, bone, charred plants	offroad vehicles, erosion	Parially surveyed MF 204	Private	1972, 1979	ND
CA-Riv-1634	La Quinta	Habitation	+35	5,105	ceramics, bone, groundstone, lithics	amateur excavation, erosion	Partially surveyed MF 2396 & 2558	Unknown	1972, 1990	ND
CA-Riv-1637	La Quinta	Habitation	+60	2,592	lithics, ceramics, groundstone, habitation debris	some disturbance	Partially surveyed MF 3620	Unknown	1972, 1990	ND
CA-Riv-1638	La Quinta	Habitation	+50	2,945	lithics, ceramics, bone	some disturbance	Partially surveyed MF 1507	Unknown	1972	ND
CA-Riv-1767	La Quinta	Habitation	+42	125,664	ceramics, aquatic & terrestrial mammal bone	some disturbance	Partially surveyed MF 2396	Unknown	1980	ND
CA-Riv-1768	La Quinta	Habitation	+42	15,708	ceramics, aquatic & terrestrial mammal bone	some disturbance	Recorded MF 2396	Unknown	1980	ND
CA-Riv-1970	La Quinta	Habitation	+35	68,173	lithics, ceramics, bedrock slick/mortar, FAR	offroad vehicles, some erosion	Surveyed MF 908	Unknown	1980	ND
CA-Riv-1971	La Quinta	Habitation?	+40	942	lithics, ceramics, groundstone	some disturbance	Surveyed MF 908	Private	1980	ND
CA-Riv-1972	La Quinta	Habitation	+44	5,309	ceramics, groundstone, FAR	some disturbance	Surveyed MF 908	Private	1980	ND
CA-Riv-1973	La Quinta	Habitation	+30	19,792	ceramics, groundstone, FAR	some disturbance	Surveyed MF 908	Private	1980	ND
CA-Riv-1974	La Quinta	Habitation	+35	5,616	lithics, ceramics, groundstone, FAR, bone	some disturbance	Surveyed MF 908	Private	1980	ND

Appendix D

KNOWN PREHISTORIC ARCHAEOLOGICAL SITES WITHIN THE STUDY AREA

Site Number (trinomial)	Location (USGS Quad)	Site Type	Elevation (feet)	Site Area (m ²)	Site Contents	Site Condition	Level of Investigation* (with MF No.)	Land Ownership	Year Recorded With Updates	Nat. Reg. Status**
CA-Riv-2789	La Quinta	Unknown	+40	236	ceramics	offroad vehicles	Recorded	Unknown	1984	ND
CA-Riv-4490	La Quinta	Unknown	+50	1,964	ceramics	unknown	Surveyed MF 188	Private	1958	ND
Temp No. OR-1	La Quinta	Habitation	+43	4,084	ceramics, lithics, groundstone, FAR, <u>cremation</u> , bone, habitation debris	offroad vehicles, some grading	Surveyed MF 3601	Private	1991	ND
Temp No. OR-2	La Quinta	Habitation	+40	22,620	ceramics, lithics, FAR, bone, habitation debris, <u>cremations?</u> , coprolites	intact	Partially surveyed MF 3601	Private	1991	ND

- AFAR = Fire Altered Rock.
- BTrail = trail locations not fully documented.
- *MF No. = Manuscript File Number at the Eastern Information Center at UC Riverside.
- Recorded = Site recorded outside context of archaeological survey.
- Surveyed = Site surveyed and recorded within context of archaeological survey.
- Partially surveyed = only a part of the site lies within zone surveyed.
- Tested = Evaluation test excavations have taken place.
- **ND = No determination yet made.

NOTE: This table is based on data collected in May 1992.

APPENDIX E

NOISE

APPENDIX E - NOISE

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Table E-1

MAJOR ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Washington St	North of 38th	2,200	55	95.8	1.6	2.6
"	38th - Varner	1,500	55	95.8	1.6	2.6
"	Country Club - Fred Waring	18,000 - 19,200	55	95.8	1.6	2.6
"	Fred Waring - Hwy 111	15,100	55	95.8	1.6	2.6
"	South of Hwy 111	19,700	55	95.8	1.6	2.6
Jefferson St	Indio - Hwy 111	4,900	45	95.8	1.6	2.6
"	Hwy 111 - 50th	11,000	45	95.8	1.6	2.6
"	50th - 52th	7,200	45	95.8	1.6	2.6
Madison St	I-10 - 40th	200	45	95.8	1.6	2.6
Clinton	Indio - Dr. Carreon	10,700	35	95.8	1.6	2.6
Monroe St	40th - 42th	2,300	35	94.3	1.6	4.1
"	42th - Market	7,600	35	94.3	1.6	4.1
"	Market - 48th	13,300	35	94.3	1.6	4.1
"	48th - 52th	9,200	35	94.3	1.6	4.1
Jackson St	40th - I-10	400	55	95.8	1.6	2.6
"	I-10 - 44th	4,200	55	95.8	1.6	2.6
"	44th - Dr. Carreon	4,300 - 4,500	55	98.6	0.7	0.7
"	Dr. Carreon - 52th	5,200 - 5,400	55	98.4	0.0	1.6
Van Buren	Hwy 111 - 50th	2,600	45	95.8	1.6	2.6

Table E-1 (cont'd)

MAJOR ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
"	50th - South of 52nd	1,900	45	95.8	1.6	2.6
Harrison St	Hwy 111 - 52th	15,200 - 17,000	45	95.8	1.6	2.6
40th Ave	Adams - Madison	600	55	95.8	1.6	2.6
"	Madison - Monroe	800	55	95.8	1.6	2.6
"	Monroe - Jackson	200	55	95.8	1.6	2.6
42th Ave	Washington - Country Club	7,200	55	95.8	1.6	2.6
"	Varner - Van Buren	600	55	95.8	1.6	2.6
Fred Waring Dr	Washington - Jefferson	11,000	45	98.0	2.0	0.0
"	Jefferson - Indio	6,900	45	98.0	2.0	0.0
44th Ave	Market - Jackson	8,500	35	95.8	1.6	2.6
"	Jackson - East of Jackson	4,300	35	95.8	1.6	2.6
"	West of SR- 86 - SR-86	3,900	35	95.8	1.6	2.6
Hwy 111	West of Washington - East of Monroe	19,000 - 23,300	45	91.4	7.8	0.8
"	West of Oasis - Auto Center	13,300 - 18,300	45	91.4	7.8	0.8
"	Auto Center - Calhoun	11,300	45	87.8	11.0	1.2
Dr. Carreon	Clinton - Jackson	7,300	35	97.3	1.8	0.9

Table E-1 (cont'd)

MAJOR ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
"	Jackson - Van Buren	3,100	35	97.3	1.8	0.9
50th Ave	Jefferson - Monroe	7,100	55	98.5	0.0	1.5
"	Monroe - Harrison	5,600 - 6,400	55	98.5	0.0	1.5
Varner Rd	West of Washington - 42th	2,400	45	95.8	1.6	2.6
I-10	West of Washington - Jefferson	38,000 - 45,000	55	67.5	5.9	26.6
"	Jefferson - Jackson	25,000 - 27,500	55	67.5	5.9	26.6
"	Jackson - SR-86	20,900 - 23,400	55	67.5	5.9	26.6
"	SR-86 - Dillon	14,700	55	69.9	5.0	25.1
Country Club Dr	West of Washington	17,300	45	95.8	1.6	2.6
"	Washington - Adams	8,000 - 8,600	45	95.8	1.6	2.6
"	Adams - Jefferson	6,500	45	95.8	1.6	2.6
Indio Blvd	Jefferson - Monroe	19,500	55	92.8	3.6	3.6
"	Monroe - Oasis	22,900	45	90.3	3.4	6.3
"	Oasis - Auto Center	21,500	40	92.3	2.5	5.2
"	Auto Center - Harrison	29,000 - 31,500	45	94.4	1.6	4.0
SR-86	I-10 - Dillon	5,000	50	83.0	6.0	11.0
Auto Center Dr	I-10 - Hwy 111	5,300	45	95.8	1.6	2.6

Table E-1 (cont'd)

MAJOR ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Dillon Rd	SR-86 - Hwy 111	13,200	45	95.8	1.6	2.6

Table E-2

NOISE LEVELS ALONG MAJOR ROADS WITHIN THE PROJECT AREA

Road Name	Location	CNEL @ 50 Feet	Distance to 75 dBA CNEL (Feet)	Distance to 70 dBA CNEL (Feet)	Distance to 65 dBA CNEL (Feet)	Distance to 60 dBA CNEL (Feet)
Washington St	North of 38th	66	<50	<50	63	199
"	38th - Varner	65	<50	<50	50	158
"	Country Club - Fred Waring	75	50	158	500	1,581
"	Fred Waring - Hwy 111	74	<50	126	397	1,256
"	South of Hwy 111	75	50	158	500	1,581
Jefferson St	Indio - Hwy 111	68	<50	<50	100	315
"	Hwy 111 - 50th	71	<50	63	199	629
"	50th - 52th	69	<50	<50	126	397
Madison St	I-10 - 40th	52	<50	<50	<50	<50
Clinton	Indio - Dr. Carreon	69	<50	<50	126	397
Monroe St	40th - 42th	63	<50	<50	<50	100
"	42th - Market	68	<50	<50	100	315
"	Market - 48th	71	<50	63	199	629
"	48th - 52th	69	<50	<50	126	397
Jackson St	40th - I-10	58	<50	<50	<50	<50
"	I-10 - 44th	69	<50	<50	126	397
"	44th - Dr. Carreon	68	<50	<50	100	315
"	Dr. Carreon - 52th	69	<50	<50	126	397
Van Buren	Hwy 111 - 50th	65	<50	<50	50	158
"	50th - South of 52nd	64	<50	<50	<50	126

Table E-2 (cont'd)

NOISE LEVELS ALONG MAJOR ROADS WITHIN THE PROJECT AREA

Road Name	Location	CNEL @ 50 Feet	Distance to 75 dBA CNEL (Feet)	Distance to 70 dBA CNEL (Feet)	Distance to 65 dBA CNEL (Feet)	Distance to 60 dBA CNEL (Feet)
Harrison St	Hwy 111 - 52th	73	<50	100	315	998
40th Ave	Adams - Madison	60	<50	<50	<50	50
"	Madison - Monroe	61	<50	<50	<50	63
"	Monroe - Jackson	54	<50	<50	<50	<50
42th Ave	Washington - Country Club	71	<50	63	199	629
"	Varner - Van Buren	60	<50	<50	<50	50
Fred Waring Dr	Washington - Jefferson	70	<50	50	158	500
"	Jefferson - Indio	68	<50	<50	100	315
44th Ave	Market - Jackson	68	<50	<50	100	315
"	Jackson - East of Jackson	65	<50	<50	50	158
"	West of SR-86 - SR-86	64	<50	<50	<50	126
Hwy 111	West of Washington - East of Monroe	74	<50	126	397	1,256
"	West of Oasis - Auto Center	73	<50	100	315	998
"	Auto Center - Calhoun	72	<50	79	251	792
Dr. Carreon	Clinton - Jackson	66	<50	<50	63	199
"	Jackson - Van Buren	62	<50	<50	<50	79

Table E-2 (cont'd)

NOISE LEVELS ALONG MAJOR ROADS WITHIN THE PROJECT AREA

Road Name	Location	CNEL @ 50 Feet	Distance to 75 dBA CNEL (Feet)	Distance to 70 dBA CNEL (Feet)	Distance to 65 dBA CNEL (Feet)	Distance to 60 dBA CNEL (Feet)
50th Ave	Jefferson - Monroe	71	<50	63	199	629
"	Monroe - Harrison	70	<50	50	158	500
Varner Rd	West of Washington - 42th	64	<50	<50	<50	126
I-10	West of Washington - Jefferson	84	397	1,256	3,972	12,559
"	Jefferson - Jackson	82	251	792	2,506	7,924
"	Jackson - SR-86	81	199	629	1,991	6,295
"	SR-86 - Dillon	79	126	397	1,256	3,972
Country Club Dr	West of Washington	73	<50	100	315	998
"	Washington - Adams	70	<50	50	158	500
"	Adams - Jefferson	69	<50	<50	126	397
Indio Blvd	Jefferson - Oasis	76	63	199	629	1,991
"	Oasis - Auto Center	74	<50	126	397	1,256
"	Auto Center - Harrison	76	63	199	629	1,991
SR-86	I-10 - Dillon	72	<50	79	251	792
Auto Center Dr	I-10 - Hwy 111	68	<50	<50	100	315
Dillon Rd	SR-86 - Hwy 111	72	<50	79	251	792

Table E-3

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Washington St	North of the Unnamed	10,900	45	95.8	1.6	2.6
Washington St	Unnamed street to of 38th	17,400	45	95.8	1.6	2.6
Washington St	38th - Varner	28,200	45	95.8	1.6	2.6
Washington St	Country Club - 52nd	ND ¹	45	95.8	1.6	2.6
Adams St.	North of 38th	3,900	35	95.8	1.6	2.6
Adams St.	38th - 40th	15,700	35	95.8	1.6	2.6
Adams St.	40th - 42nd	6,300 - 6,900	35	95.8	1.6	2.6
Dune Palms Road	Fred Waring - 46th	10,100 - 11,200	35	95.8	1.6	2.6
Dune Palms Road	46th - Highway 111	14,300	35	95.8	1.6	2.6
Dune Palms Road	Highway 111 - 48th	36,800	35	95.8	1.6	2.6
Jefferson St	38th - 40th	23,600	35	95.8	1.6	2.6
Jefferson St	40th - Varner	39,000	35	95.8	1.6	2.6
Jefferson St	Varner - I-10	73,100	35	95.8	1.6	2.6
Jefferson St	I-10 - East Valley PkwY	44,500	35	95.8	1.6	2.6
Jefferson St	East Valley PkwY - Country Club	20,400	35	95.8	1.6	2.6
Jefferson St	Country Club - 48th	32,400 - 37,400	35	95.8	1.6	2.6
Jefferson St	48th - 52nd	26,400 - 29,600	35	95.8	1.6	2.6
Jefferson St	South of 52nd	20,100	35	95.8	1.6	2.6
Burr St	East Valley PkwY - Fred Waring	26,100 - 29,400	35	95.8	1.6	2.6
Burr St	Fred Waring - Miles	24,400	35	95.8	1.6	2.6
Shields Rd	46th - Hwy 111	18,300	35	95.8	1.6	2.6
Shields Rd	Hwy 111 - 48th	22,900	35	95.8	1.6	2.6
Shields Rd	48th - 49th	19,100	35	95.8	1.6	2.6
Madison St	Eastside - 40th	9,800	35	95.8	1.6	2.6
Madison St	40th - 41st	15,100	35	95.8	1.6	2.6
Madison St	East Valley PkwY - Fred Waring	2,400	35	95.8	1.6	2.6
Madison St	Miles - 46th	36,700	35	95.8	1.6	2.6
Madison St	46th - Hwy 111	27,200	35	95.8	1.6	2.6

Table E-3

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA
WITHOUT PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Madison St	Hwy 111 - 48th	32,700	35	95.8	1.6	2.6
Madison St	48th - 49th	31,500	35	95.8	1.6	2.6
Madison St	49th - 50th	41,400	35	95.8	1.6	2.6
Madison St	50th - South of 52nd	27,800 - 28,500	35	95.8	1.6	2.6
Clinton St	41st - 42nd	11,000	30	95.8	1.6	2.6
Clinton St	42nd - Unnamed Street	2,400	30	95.8	1.6	2.6
Clinton St	East Valley Pkwy - Fred Waring	14,400	30	95.8	1.6	2.6
Clinton St	Fred Waring - Miles	27,000	30	95.8	1.6	2.6
Clinton St	Miles - Dr. Carreon	19,700 - 21,900	30	95.8	1.6	2.6
Unnamed Road	Between Clinton and Monroe	10,000	30	95.8	1.6	2.6
Monroe St	40th - Unnamed Street	41,200	30	94.3	1.6	4.1
Monroe St	Unnamed Street - I-10	79,400	30	94.3	1.6	4.1
Monroe St	I-10 - 44th	45,700	30	94.3	1.6	4.1
Monroe St	44th - Fred Waring	55,500	30	94.3	1.6	4.1
Monroe St	Fred Waring - Miles	22,700 - 24,500	30	94.3	1.6	4.1
Monroe St	Miles - Requa	18,200	30	94.3	1.6	4.1
Monroe St	Requa - Hwy 111	25,700	30	94.3	1.6	4.1
Monroe St	Hwy 111 - Dr. Carreon	18,800	30	94.3	1.6	4.1
Monroe St	Dr. Carreon - 48th	28,200	30	94.3	1.6	4.1
Monroe St	48th - 52nd	22,400 - 23,000	30	94.3	1.6	4.1
Monroe St	South of 52nd	12,300	30	94.3	1.6	4.1
Arabia St	North of 41st - 42nd	8,600 - 9,200	30	94.3	1.6	4.1
Arabia St	Requa - Hwy 111	18,500	30	94.3	1.6	4.1
Arabia St	Hwy 111 - Dr. Carreon	10,300	30	94.3	1.6	4.1
Arabia St	Dr. Carreon - 48th	11,600	30	94.3	1.6	4.1
Oasis St	Miles - 48th	18,201 - 21,100	30	94.3	1.6	4.1
Jackson St	North of 41st	10,100	45	94.3	1.6	4.1
Jackson St	41st - 42nd	25,500	45	94.3	1.6	4.1

Table E-3

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Jackson St	42nd - Unnamed Street	48,200	45	95.8	1.6	2.6
Jackson St	Unnamed Street - I-10	66,400	45	95.8	1.6	2.6
Jackson St	I-10 - 45th	55,700 - 58,700	45	95.8	1.6	2.6
Jackson St	45th - Requa	66,400	45	98.6	0.7	0.7
Jackson St	Requa - Dr. Carreon	28,700 - 30,900	45	98.4	0.0	1.6
Jackson St	Dr. Carreon - 50th	23,400 - 27,400	45	98.4	0.0	1.6
Jackson St	50th - 52nd	22,300	45	98.4	0.0	1.6
Jackson St	South of 52nd	16,500	45	98.4	0.0	1.6
Van Buren	42nd - 44th	28,200	35	95.8	1.6	2.6
Van Buren	44th - Unnamed Street	43,100	35	95.8	1.6	2.6
Van Buren	Unnamed Street - 45th	56,400 - 57,500	35	95.8	1.6	2.6
Van Buren (Cabezon)	From Auto Center - Between Auto Center and Dillon	14,700	35	95.8	1.6	2.6
Van Buren (Cabezon)	From Between Auto Center and Dillon - Dillon	12,300	35	95.8	1.6	2.6
Van Buren (Cabezon)	Grapefruit - 48th	71,200	35	95.8	1.6	2.6
Van Buren (Cabezon)	48th - 50th	35,200	35	95.8	1.6	2.6
Van Buren (Cabezon)	50th - 52nd	20,500	35	95.8	1.6	2.6
Van Buren (Cabezon)	South of 52nd	10,000	35	95.8	1.6	2.6
Auto Center Dr	I-10 - 45th	57,500	35	95.8	1.6	2.6
Auto Center Dr	45th - East Valley PkwY	45,400	35	95.8	1.6	2.6
Calhoun St	Hwy 111 - Dr. Carreon	23,900	35	95.8	1.6	2.6
Calhoun St	Dr. Carreon - 48th	16,400	35	95.8	1.6	2.6
Calhoun St	48th - 50th	13,200	35	95.8	1.6	2.6
Calhoun St	50th - 52nd	2,900	35	95.8	1.6	2.6
Unnamed Street	North of 44th	7,100	35	95.8	1.6	2.6
Harrison St	North of 44th	7,100	35	95.8	1.6	2.6

Table E-3

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Harrison St	44th - Unnamed Street	3,800	35	95.8	1.6	2.6
Harrison St	Unnamed Street - Grapefruit	8,600 - 8,900	35	95.8	1.6	2.6
Dillon	North of 44th	5,100 -	35	95.8	1.6	2.6
Dillon	North of 44th	5,400	35	95.8	1.6	2.6
Dillon	44th - 45th	14,100	35	95.8	1.6	2.6
Dillon	45th - 46th	28,500	35	95.8	1.6	2.6
Dillon	46th - Unnamed Street	42,100 - 42,200	35	95.8	1.6	2.6
Dillon	Unnamed Street - Ramp South of SR-86	56,800 - 59,700	35	95.8	1.6	2.6
Dillon	Ramp South of SR-86 - 48th	69,500 - 74,700	35	95.8	1.6	2.6
Unnamed street	Washington - Adams	9,500	35	95.8	1.6	2.6
38th Ave	Adams - Between Adams and Jefferson	10,200	35	95.8	1.6	2.6
38th Ave	Between Adams and Jefferson - Jefferson	23,800	35	95.8	1.6	2.6
38th Ave	Jefferson - Madison	18,400	35	95.8	1.6	2.6
Eastside Dr	Madison - Monroe	16,300	35	95.8	1.6	2.6
40th Ave	Adams - Jefferson	19,300	45	95.8	1.6	2.6
40th Ave	Jefferson - Madison	26,500	45	95.8	1.6	2.6
40th Ave	Madison - Monroe	21,700	45	95.8	1.6	2.6
41st Ave	Varner - Madison	12,000	45	95.8	1.6	2.6
41st Ave	Madison - Unnamed Street	15,800	45	95.8	1.6	2.6
41st Ave	Unnamed Street - Monroe	2,700	45	95.8	1.6	2.6
41st Ave	Monroe - Jackson	12,000 - 12,400	45	95.8	1.6	2.6
42nd Ave	Washington - Adams	14,300	45	95.8	1.6	2.6
42nd Ave	Adams - Country Club	24,500	45	95.8	1.6	2.6
42nd Ave	Varner - Between Varner and Unnamed Street	21,800	45	95.8	1.6	2.6

Table E-3

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
42nd Ave	Between Varner and Unnamed Street - Unnamed Street	25,600	45	95.8	1.6	2.6
42nd Ave	Unnamed Street - Jackson	32,600 - 34,000	45	95.8	1.6	2.6
42nd Ave	Jackson - Van Buren	25,200	45	95.8	1.6	2.6
Fred Waring Dr	Washington - Jefferson	31,200 - 31,800	35	98.0	2.0	0.0
Fred Waring Dr	Jefferson - Burr	25,800	35	98.0	2.0	0.0
Fred Waring Dr	Burr - Monroe	34,100 - 38,200	35	98.0	2.0	0.0
Fred Waring Dr	Monroe - East Valley Pkw	22,400	35	98.0	2.0	0.0
45th Ave	Jackson - Auto Center	23,100	35	95.8	1.6	2.6
Miles Ave	Washington - Jefferson	24,900 - 27,700	30	95.8	1.6	2.6
Miles Ave	Jefferson - Burr	19,800	30	95.8	1.6	2.6
Miles Ave	Burr - Madison	43,100	30	95.8	1.6	2.6
Miles Ave	Madison - Monroe	24,800 - 25,600	30	95.8	1.6	2.6
Miles Ave	Monroe - East Valley Pkw	27,800	30	95.8	1.6	2.6
Requa Ave	Monroe - Arabia	10,200	35	95.8	1.6	2.6
Requa Ave	Arabia - Oasis	20,300	35	95.8	1.6	2.6
Requa Ave	Oasis - Jackson	39,100	35	95.8	1.6	2.6
46th Ave	Dune Palms - Jefferson	3,400	35	95.8	1.6	2.6
46th Ave	Shields - Clinton	21,000 - 22,100	35	95.8	1.6	2.6
46th Ave	Clinton - Monroe	14,400	35	95.8	1.6	2.6
Hwy 111	Washington - Dune Palms	42,300	35	91.4	7.8	0.8
Hwy 111	Dune Palms - Madison	27,900 - 29,000	35	91.4	7.8	0.8
Hwy 111	Madison - Clinton	32,400	35	87.8	11.0	1.2
Hwy 111	Clinton - Monroe	34,400	35	87.8	11.0	1.2
Hwy 111	Monroe - Arabia	29,000	35	87.8	11.0	1.2
Hwy 111	Arabia - Oasis	26,100	35	87.8	11.0	1.2

Table E-3

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA
WITHOUT PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Hwy 111	Oasis - Auto Center	26,900 - 30,700	35	87.8	11.0	1.2
Hwy 111	Auto Center - Calhoun	36,600	35	87.8	11.0	1.2
Dr. Carreon Blvd	Clinton - Arabia	18,000 - 19,500	30	97.3	1.8	0.9
Dr. Carreon Blvd	Arabia - Oasis	14,100	30	97.3	1.8	0.9
Dr. Carreon Blvd	Oasis - Jackson	12,100	30	97.3	1.8	0.9
Dr. Carreon Blvd	Jackson - Unnamed Street	7,200 - 8,600	30	97.3	1.8	0.9
48th Ave	Washington - Dune Palms	19,100	35	95.8	1.6	2.6
48th Ave	Dune Palms - Madison	44,800 - 49,900	35	95.8	1.6	2.6
48th Ave	Madison - Jackson	50,500 - 52,900	35	95.8	1.6	2.6
48th Ave	Jackson - Calhoun	38,900	35	95.8	1.6	2.6
48th Ave	Calhoun - Van Buren	42,100 - 48,900	35	95.8	1.6	2.6
49th Ave	Jefferson - Shields	7,600	35	95.8	1.6	2.6
49th Ave	Shields - Madison	13,900	35	95.8	1.6	2.6
49th Ave	Madison - Monroe	6,900	35	95.8	1.6	2.6
50th Ave	Washington - Jefferson	28,100	45	98.5	0.0	1.5
50th Ave	Jefferson - Madison	35,100	45	98.5	0.0	1.5
50th Ave	Madison - Van Buren	35,400 - 41,900	45	98.5	0.0	1.5
50th Ave	Van Buren - Harrison	27,900	45	98.5	0.0	1.5
52nd Ave	Washington - Monroe	31,800 - 35,600	45	98.5	0.0	1.5
52nd Ave	Monroe - Harrison	39,800 - 43,500	45	98.5	0.0	1.5
Varner Rd	West of 40th	44,100	35	95.8	1.6	2.6
Varner Rd	40th - Adams	17,600	35	95.8	1.6	2.6
Varner Rd	Adams - Jefferson	31,200	35	95.8	1.6	2.6
Varner Rd	Jefferson - 41st	39,700	35	95.8	1.6	2.6
I-10	West of Jefferson - Dillon	126,600 - 142,500	55	67.5	5.9	26.6
I-10	East of Dillon	40,100	55	67.5	5.9	26.6
SR-86	East of Dillon	55,500	55	83.0	6.0	11.0
Country Club Dr	Washington - 42nd	26,200 - 31,600	35	95.8	1.6	2.6

Table E-3

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA
WITHOUT PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Country Club Dr	42nd - Jefferson	46,800	35	95.8	1.6	2.6
Country Club Dr	Jefferson - Burr	36,900	35	95.8	1.6	2.6
Country Club Dr	Burr - East Valley Pkwy	10,600	35	95.8	1.6	2.6
East Valley Pkwy	I-10 - Jefferson	55,400	45	92.8	3.6	3.6
East Valley Pkwy	Jefferson - Burr	42,800	45	92.8	3.6	3.6
East Valley Pkwy	Burr - Country Club	19,500	35	90.3	3.4	6.3
East Valley Pkwy	Country Club - Clinton	32,100	35	90.3	3.4	6.3
East Valley Pkwy	Clinton - Fred Waring	23,800	35	90.3	3.4	6.3
East Valley Pkwy	Fred Waring - Oasis	31,000	35	90.3	3.4	6.3
East Valley Pkwy	Oasis - Jackson	18,300	35	92.3	2.5	5.2
East Valley Pkwy	Jackson - Unnamed Street	27,400 - 28,200	35	92.3	2.5	5.2
East Valley Pkwy	Unnamed Street - Dillon	24,700	35	92.3	2.5	5.2
East Valley Pkwy	Dillon - Harrison	47,600	35	94.4	1.6	4.0

Table E-4

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE
PROJECT AREA WITH PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Washington St	North of the Unnamed street	11,000	45	95.8	1.6	2.6
Washington St	Unnamed street to of 38th	17,000	45	95.8	1.6	2.6
Washington St	38th - Varner	28,200	45	95.8	1.6	2.6
Adams St.	North of 38th	3,500	35	95.8	1.6	2.6
Adams St.	38th - 40th	16,400	35	95.8	1.6	2.6
Adams St.	40th - 42nd	6,300 - 7,700	35	95.8	1.6	2.6
Dune Palms Road	Fred Waring - 46th	10,200 - 10,500	35	95.8	1.6	2.6
Dune Palms Road	46th - Highway 111	14,300	35	95.8	1.6	2.6
Dune Palms Road	Highway 111 - 48th	33,700	35	95.8	1.6	2.6
Jefferson St	38th - 40th	21,300	35	95.8	1.6	2.6
Jefferson St	40th - Varner	31,600	35	95.8	1.6	2.6
Jefferson St	Varner - I-10	57,100	35	95.8	1.6	2.6
Jefferson St	I-10 - East Valley Pkwy	33,100	35	95.8	1.6	2.6
Jefferson St	East Valley Pkwy - Country Club	21,800	35	95.8	1.6	2.6
Jefferson St	Country Club - Fred Waring	39,700	35	95.8	1.6	2.6
Jefferson St	Fred Waring - 46th	41,600 - 43,900	35	95.8	1.6	2.6
Jefferson St	46th - Hwy 111	39,100	35	95.8	1.6	2.6
Jefferson St	Hwy 111 - 48th	42,000	35	95.8	1.6	2.6
Jefferson St	48th - 50th	28,000 - 31,000	35	95.8	1.6	2.6
Jefferson St	50th - 52nd	31,800	35	95.8	1.6	2.6
Jefferson St	South of 52nd	20,100	35	95.8	1.6	2.6
Burr St	East Valley Pkwy - Fred Waring	20,400 - 24,600	35	95.8	1.6	2.6
Burr St	Fred Waring - Miles	17,200	35	95.8	1.6	2.6
Shields Rd	46th - Hwy 111	20,900	35	95.8	1.6	2.6
Shields Rd	Hwy 111 - 48th	24,000	35	95.8	1.6	2.6
Shields Rd	48th - 49th	18,800	35	95.8	1.6	2.6
Madison St	Eastside - 40th	13,700	35	95.8	1.6	2.6

Table E-4

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE
PROJECT AREA WITH PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Madison St	40th - 41st	31,200	35	95.8	1.6	2.6
Madison St	41st - 42nd	28,900	35	95.8	1.6	2.6
Madison St	42nd - I-10	61,600	35	95.8	1.6	2.6
Madison St	East Valley Pkwy - Fred Waring	42,000	35	95.8	1.6	2.6
Madison St	Fred Waring - Miles	29,600	35	95.8	1.6	2.6
Madison St	Miles - 46th	43,800	35	95.8	1.6	2.6
Madison St	46th - Hwy 111	30,900	35	95.8	1.6	2.6
Madison St	Hwy 111 - 48th	36,000	35	95.8	1.6	2.6
Madison St	48th - 49th	29,800	35	95.8	1.6	2.6
Madison St	49th - 50th	39,400	35	95.8	1.6	2.6
Madison St	50th - South of 52nd	28,400 - 29,000	35	95.8	1.6	2.6
Clinton St	41st - 42nd	4,600	30	95.8	1.6	2.6
Clinton St	42nd - Unnamed Street	800	30	95.8	1.6	2.6
Clinton St	East Valley Pkwy - Fred Waring	10,200	30	95.8	1.6	2.6
Clinton St	Fred Waring - Miles	17,300	30	95.8	1.6	2.6
Clinton St	Miles - Dr. Carreon	20,000 - 21,900	30	95.8	1.6	2.6
Unnamed Road	Between Clinton and Monroe	10,100	30	95.8	1.6	2.6
Monroe St	40th - Unnamed Street	35,800 - 40,700	30	94.3	1.6	4.1
Monroe St	Unnamed Street - I-10	65,700	30	94.3	1.6	4.1
Monroe St	I-10 - 44th	49,100	30	94.3	1.6	4.1
Monroe St	44th - Fred Waring	64,100	30	94.3	1.6	4.1
Monroe St	Fred Waring - Miles	31,300 - 31,800	30	94.3	1.6	4.1
Monroe St	Miles - Requa	23,800	30	94.3	1.6	4.1
Monroe St	Requa - Hwy 111	32,000	30	94.3	1.6	4.1
Monroe St	Hwy 111 - Dr. Carreon	26,800	30	94.3	1.6	4.1
Monroe St	Dr. Carreon - 48th	30,800	30	94.3	1.6	4.1
Monroe St	48th - 52nd	22,500 - 24,400	30	94.3	1.6	4.1
Monroe St	South of 52nd	12,900	30	94.3	1.6	4.1

Table E-4

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE
PROJECT AREA WITH PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Arabia St	North of 41st - 42nd	8,700 - 9,000	30	94.3	1.6	4.1
Arabia St	Requa - Hwy 111	16,800	30	94.3	1.6	4.1
Arabia St	Hwy 111 - Dr. Carreon	11,300	30	94.3	1.6	4.1
Arabia St	Dr. Carreon - 48th	13,200	30	94.3	1.6	4.1
Oasis St	Miles - Hwy 111	17,000	30	94.3	1.6	4.1
Oasis St	Hwy 111 - Dr. Carreon	24,300	30	94.3	1.6	4.1
Oasis St	Dr. Carreon - 48th	20,700	30	94.3	1.6	4.1
Jackson St	North of 41st	8,600	45	94.3	1.6	4.1
Jackson St	41st - 42nd	21,800	45	94.3	1.6	4.1
Jackson St	42nd - Unnamed Street	35,300	45	95.8	1.6	2.6
Jackson St	Unnamed Street - I-10	48,700	45	95.8	1.6	2.6
Jackson St	I-10 - 44th	40,600	45	95.8	1.6	2.6
Jackson St	44th - 45th	48,400	45	95.8	1.6	2.6
Jackson St	45th - Requa	57,700	45	98.6	0.7	0.7
Jackson St	Requa - Dr. Carreon	23,600 - 28,200	45	98.4	0.0	1.6
Jackson St	Dr. Carreon - 48th	21,200	45	98.4	0.0	1.6
Jackson St	48th - 50th	22,900	45	98.4	0.0	1.6
Jackson St	50th - 52nd	21,300	45	98.4	0.0	1.6
Jackson St	South of 52nd	15,800	45	98.4	0.0	1.6
Van Buren	42nd - 44th	25,300	35	95.8	1.6	2.6
Van Buren	44th - Unnamed Street	37,700	35	95.8	1.6	2.6
Van Buren	Unnamed Street - 45th	43,200 - 46,000	35	95.8	1.6	2.6
Van Buren (Cabezon)	From Auto Center - Between Auto Center and Dillon	14,100	35	95.8	1.6	2.6
Van Buren (Cabezon)	From Between Auto Center and Dillon - Dillon	11,500	35	95.8	1.6	2.6
Van Buren (Cabezon)	Grapefruit - 48th	65,300	35	95.8	1.6	2.6
Van Buren (Cabezon)	48th - 50th	32,800	35	95.8	1.6	2.6

Table E-4

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE
PROJECT AREA WITH PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Van Buren (Cabezon)	50th - 52nd	19,900	35	95.8	1.6	2.6
Van Buren (Cabezon)	South of 52nd	10,000	35	95.8	1.6	2.6
Auto Center Dr	I-10 - 45th	43,200	35	95.8	1.6	2.6
Auto Center Dr	45th - East Valley Pkwy	28,900	35	95.8	1.6	2.6
Calhoun St	Hwy 111 - Dr. Carreon	22,300	35	95.8	1.6	2.6
Calhoun St	Dr. Carreon - 48th	16,400	35	95.8	1.6	2.6
Calhoun St	48th - 50th	13,000	35	95.8	1.6	2.6
Calhoun St	50th - 52nd	3,000	35	95.8	1.6	2.6
Unnamed Street	North of 44th	7,100	35	95.8	1.6	2.6
Harrison St	North of 44th	7,100	35	95.8	1.6	2.6
Harrison St	44th - Unnamed Street	3,800	35	95.8	1.6	2.6
Harrison St	Unnamed Street - Grapefruit	8,900 - 9,700	35	95.8	1.6	2.6
Dillon	North of 44th	5,100	35	95.8	1.6	2.6
Dillon	North of 44th	5,300	35	95.8	1.6	2.6
Dillon	44th - 45th	13,900	35	95.8	1.6	2.6
Dillon	45th - 46th	28,200	35	95.8	1.6	2.6
Dillon	46th - Unnamed Street	40,300 - 41,700	35	95.8	1.6	2.6
Dillon	Unnamed Street - Ramp South of SR-86	55,100 - 57,400	35	95.8	1.6	2.6
Dillon	Ramp South of SR-86 - 48th	64,700 - 68,900	35	95.8	1.6	2.6
Unnamed street	Washington - Adams	8,600	35	95.8	1.6	2.6
38th Ave	Adams - Between Adams and Jefferson	10,000	35	95.8	1.6	2.6
38th Ave	Between Adams and Jefferson - Jefferson	23,800	35	95.8	1.6	2.6
38th Ave	Jefferson - Madison	18,600	35	95.8	1.6	2.6
Eastside Dr	Madison - Monroe	15,400	35	95.8	1.6	2.6
40th Ave	Adams - Jefferson	17,500	45	95.8	1.6	2.6
40th Ave	Jefferson - Madison	19,400	45	95.8	1.6	2.6

Table E-4

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE
PROJECT AREA WITH PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
40th Ave	Madison - Monroe	18,700	45	95.8	1.6	2.6
41st Ave	Varner - Madison	7,600	45	95.8	1.6	2.6
41st Ave	Madison - Unnamed Street	7,600	45	95.8	1.6	2.6
41st Ave	Unnamed Street - Monroe	3,100	45	95.8	1.6	2.6
41st Ave	Monroe - Jackson	9,500 - 10,900	45	95.8	1.6	2.6
42nd Ave	Washington - Adams	14,000	45	95.8	1.6	2.6
42nd Ave	Adams - Country Club	26,500	45	95.8	1.6	2.6
42nd Ave	Varner - Between Varner and Madison	23,700	45	95.8	1.6	2.6
42nd Ave	Madison - Unnamed Street	41,400	45	95.8	1.6	2.6
42nd Ave	Unnamed Street - Monroe	40,600	45	95.8	1.6	2.6
42nd Ave	Monroe - Jackson	31,700 - 33,700	45	95.8	1.6	2.6
42nd Ave	Jackson - Van Buren	23,800	45	95.8	1.6	2.6
Fred Waring Dr	Washington - Jefferson	37,300 - 37,600	35	98.0	2.0	0.0
Fred Waring Dr	Jefferson - Burr	35,300	35	98.0	2.0	0.0
Fred Waring Dr	Burr - Madison	45,600	35	98.0	2.0	0.0
Fred Waring Dr	Madison - Monroe	34,700 - 39,300	35	98.0	2.0	0.0
Fred Waring Dr	Monroe - East Valley Pkwy	25,100	35	98.0	2.0	0.0
45th Ave	Jackson - Auto Center	25,000	35	95.8	1.6	2.6
Miles Ave	Washington - Dune Palms	26,200	30	95.8	1.6	2.6
Miles Ave	Dune Palms - Jefferson	31,800	30	95.8	1.6	2.6
Miles Ave	Jefferson - Burr	22,100	30	95.8	1.6	2.6
Miles Ave	Burr - Madison	33,400	30	95.8	1.6	2.6
Miles Ave	Madison - Clinton	23,000	30	95.8	1.6	2.6
Miles Ave	Clinton - Monroe	18,800	30	95.8	1.6	2.6
Miles Ave	Monroe - East Valley Pkwy	24,500	30	95.8	1.6	2.6

Table E-4

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE
PROJECT AREA WITH PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
Requa Ave	Monroe - Arabia	10,600	35	95.8	1.6	2.6
Requa Ave	Arabia - Oasis	17,000	35	95.8	1.6	2.6
Requa Ave	Oasis - Jackson	30,300	35	95.8	1.6	2.6
46th Ave	Dune Palms - Jefferson	5,500	35	95.8	1.6	2.6
46th Ave	Shields - Madison	26,200	35	95.8	1.6	2.6
46th Ave	Madison - Clinton	22,400	35	95.8	1.6	2.6
46th Ave	Clinton - Monroe	16,000	35	95.8	1.6	2.6
Hwy 111	Washington - Dune Palms	38,400	35	91.4	7.8	0.8
Hwy 111	Dune Palms - Madison	32,400 - 35,700	35	91.4	7.8	0.8
Hwy 111	Madison - Clinton	36,500	35	87.8	11.0	1.2
Hwy 111	Clinton - Monroe	37,800	35	87.8	11.0	1.2
Hwy 111	Monroe - Arabia	32,100	35	87.8	11.0	1.2
Hwy 111	Arabia - Oasis	31,900	35	87.8	11.0	1.2
Hwy 111	Oasis - Jackson	33,400	35	87.8	11.0	1.2
Hwy 111	Jackson - Auto Center	27,900	35	87.8	11.0	1.2
Hwy 111	Auto Center - Calhoun	30,800	35	87.8	11.0	1.2
Dr. Carreon Blvd	Clinton - Arabia	14,200 - 15,600	30	97.3	1.8	0.9
Dr. Carreon Blvd	Arabia - Oasis	7,100	30	97.3	1.8	0.9
Dr. Carreon Blvd	Oasis - Jackson	4,500	30	97.3	1.8	0.9
Dr. Carreon Blvd	Jackson - Calhoun	4,500	30	97.3	1.8	0.9
Dr. Carreon Blvd	Calhoun - Unnamed Street	5,500	30	97.3	1.8	0.9
48th Ave	Washington - Dune Palms	21,000	35	95.8	1.6	2.6
48th Ave	Dune Palms - Madison	41,100 - 47,200	35	95.8	1.6	2.6
48th Ave	Madison - Jackson	46,500 - 50,100	35	95.8	1.6	2.6
48th Ave	Jackson - Calhoun	37,400	35	95.8	1.6	2.6
48th Ave	Calhoun - Van Buren	40,300 - 45,500	35	95.8	1.6	2.6
49th Ave	Jefferson - Shields	7,600	35	95.8	1.6	2.6
49th Ave	Shields - Madison	12,900	35	95.8	1.6	2.6

Table E-4

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE
PROJECT AREA WITH PROJECT IMPLEMENTATION**

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
49th Ave	Madison - Monroe	5,800	35	95.8	1.6	2.6
50th Ave	Washington - Jefferson	27,600	45	98.5	0.0	1.5
50th Ave	Jefferson - Madison	34,500	45	98.5	0.0	1.5
50th Ave	Madison - Monroe	37,700	45	98.5	0.0	1.5
50th Ave	Monroe - Calhoun	32,200 - 36,700	45	98.5	0.0	1.5
50th Ave	Calhoun - Van Buren	41,100	45	98.5	0.0	1.5
50th Ave	Van Buren - Harrison	28,300	45	98.5	0.0	1.5
52nd Ave	Washington - Monroe	30,900 - 33,900	45	98.5	0.0	1.5
52nd Ave	Monroe - Harrison	39,200 - 41,300	45	98.5	0.0	1.5
Varner Rd	West of 40th	40,900	35	95.8	1.6	2.6
Varner Rd	40th - Adams	17,700	35	95.8	1.6	2.6
Varner Rd	Adams - Jefferson	31,900	35	95.8	1.6	2.6
Varner Rd	Jefferson - 41st	31,600	35	95.8	1.6	2.6
I-10	West of Jefferson - Dillon	122,000 - 147,900	55	67.5	5.9	26.6
I-10	East of Dillon	40,100	55	67.5	5.9	26.6
SR-86	East of Dillon	55,800	55	83.0	6.0	11.0
Country Club Dr	Washington - Adams	19,800	35	95.8	1.6	2.6
Country Club Dr	Adams - 42nd	15,400	35	95.8	1.6	2.6
Country Club Dr	42nd - Jefferson	37,900	35	95.8	1.6	2.6
Country Club Dr	Jefferson - Burr	31,700	35	95.8	1.6	2.6
Country Club Dr	Burr - Madison	25,400	35	95.8	1.6	2.6
Country Club Dr	Madison - East Valley Pkw	13,300	35	95.8	1.6	2.6
East Valley Pkw	I-10 - Jefferson	52,000	45	92.8	3.6	3.6
East Valley Pkw	Jefferson - Burr	44,400	45	92.8	3.6	3.6
East Valley Pkw	Burr - Country Club	19,500	35	90.3	3.4	6.3
East Valley Pkw	Country Club - Clinton	32,800	35	90.3	3.4	6.3
East Valley Pkw	Clinton - Fred Waring	27,300	35	90.3	3.4	6.3
East Valley Pkw	Fred Waring - Oasis	36,200	35	90.3	3.4	6.3
East Valley Pkw	Oasis - Miles	18,300	35	92.3	2.5	5.2

Table E-4

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE
PROJECT AREA WITH PROJECT IMPLEMENTATION

Road Name	Location	ADT	Avg Speed (mph)	Percent Autos	Percent Light Trucks	Percent Heavy Trucks
East Valley Pkwy	Miles - Hwy 111	23,000 - 24,400	35	92.3	2.5	5.2
East Valley Pkwy	Hwy 111 - Unnamed Street	27,600	35	92.3	2.5	5.2
East Valley Pkwy	Unnamed Street - Dillon	25,100	35	92.3	2.5	5.2
East Valley Pkwy	Dillon - Harrison	47,100	35	94.4	1.6	4.0

Table E-5

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	CNEL @ 50 Feet From Centerline of Road (DBA)	Distance to 75 DBA CNEL (Feet)	Distance to 70 DBA CNEL (Feet)	Distance to 65 DBA CNEL (Feet)	Distance to 60 DBA CNEL (Feet)
Washington St	North of the Unnamed street	71/71	<50	63	199	629
Washington St	Unnamed street to of 38th	73/73	<50	100	315	998
Washington St	38th - Varner	75/75	50	158	500	1,581
Adams St.	North of 38th	64/64	<50	<50	<50	126
Adams St.	38th - 40th	71/71	<50	63	199	629
Dune Palms Road	Fred Waring - 46th	69/69	<50	<50	126	397
Dune Palms Road	46th - Highway 111	70/70	<50	50	158	500
Dune Palms Road	Highway 111 - 48th	74/74	<50	126	397	1,256
Jefferson St	38th - 40th	72/72	<50	79	251	792
Jefferson St	40th - Varner	74/73	<50/<50	126/100	397/315	1,256/998
Jefferson St	Varner - I-10	77/76	79/63	251/199	792/629	2,505/1,991
Jefferson St	I-10 - East Valley Pkwy	75/74	50/<50	158/126	500/397	1,581/1,256
Jefferson St	Country Club - Fred Waring	74/74	<50	126	397	1,256
Jefferson St	Fred Waring - 46th	74/75	<50/50	126/158	397/500	1,256/1,581
Jefferson St	46th - Hwy 111	74/74	<50	126	397	1,258
Jefferson St	Hwy 111 - 48th	74/75	<50/50	126/158	397/500	1,256/1,581
Jefferson St	48th - 50th	73/73	<50	79	251	792
Jefferson St	50th - 52nd	73/74	<50/<50	79/126	251/397	792/1,256
Jefferson St	South of 52nd	72/72	<50	79	251	792
Burr St	East Valley Pkwy - Fred Waring	73/72	<50/<50	100/79	315/251	998/792
Burr St	Fred Waring - Miles	72/71	<50/<50	79/63	251/199	792/629
Shields Rd	48th - 49th	71/71	<50	63	199	629
Madison St	Eastside - 40th	68/70	<50/<50	<50/50	100/158	315/500
Madison St	40th - 41st	70/73	<50/<50	50/100	158/315	500/998
Madison St	East Valley Pkwy - Fred Waring	62/75	<50/50	<50/158	<50/500	79/1,581
Madison St	Fred Waring - Miles	NS ² /73	---/<50	---/100	---/315	---/998
Madison St	Miles - 46th	74/75	<50/50	126/158	397/500	1,256/1,581

Table E-5

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	CNEL @ 50 Feet From Centerline of Road (DBA)	Distance to 75 DBA CNEL (Feet)	Distance to 70 DBA CNEL (Feet)	Distance to 65 DBA CNEL (Feet)	Distance to 60 DBA CNEL (Feet)
Madison St	46th - Hwy 111	73/73	<50	100	315	998
Madison St	Hwy 111 - 48th	74/74	<50	126	397	1,256
Madison St	48th - 49th	73/73	<50	100	315	998
Madison St	49th - 50th	75/74	50/<50	158/126	500/397	1,581/1,256
Madison St	50th - South of 52nd	73/73	<50	100	315	998
Clinton	41st - 42nd	68/65	<50/<50	<50/<50	100/50	315/158
Clinton	42nd - Unnamed Street	62/56	<50/<50	<50/<50	<50/<50	79/<50
Clinton	East Valley Pkwy - Fred Waring	70/68	<50/<50	50/<50	158/100	500/315
Clinton	Fred Waring - Miles	72/70	<50/<50	79/50	251/158	792/500
Clinton	Miles - Dr. Carreon	71/71	<50	63	199	629
Unnamed Road	Between Clinton and Monroe	68/68	<50	<50	100	315
Monroe St	40th - Unnamed Street	75/75	50	158	500	1,581
Monroe St	Unnamed Street - I-10	78/77	100/79	315/251	998/792	3,155/2,505
Monroe St	I-10 - 44th	76/76	63	199	629	1,991
Monroe St	44th - Fred Waring	77/77	79	251	792	2,505
Monroe St	Fred Waring - Miles	73/74	<50/<50	100/126	315/397	998/1,256
Monroe St	Miles - Requa	72/73	<50/<50	79/100	251/315	792/998
Monroe St	Requa - Hwy 111	73/74	<50/<50	100/126	315/397	998/1,256
Monroe St	Hwy 111 - Dr. Carreon	72/74	<50/<50	79/126	251/397	792/1,256
Monroe St	Dr. Carreon - 48th	74/74	<50	126	397	1,256
Monroe St	48th - 52nd	73/73	<50	100	315	998
Monroe St	South of 52nd	70/70	<50	50	158	500
Arabia St	North of 41st - 42nd	69/69	<50	<50	126	397
Arabia St	Requa - Hwy 111	72/72	<50	79	251	792
Arabia St	Hwy 111 - Dr. Carreon	69/70	<50/<50	<50/50	79/158	629/500
Arabia St	Dr. Carreon - 48th	70/70	<50	50	158	500
Oasis St	Miles - 48th	72/72	<50	79	251	792
Oasis St	48th - Dr. Carreon	72/73	<50	79/100	251/315	792/998
Oasis St	Dr. Carreon - 48th	72/72	<50	79	251	792

Table E-5

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	CNEL @ 50 Feet From Centerline of Road (DBA)	Distance to 75 DBA CNEL (Feet)	Distance to 70 DBA CNEL (Feet)	Distance to 65 DBA CNEL (Feet)	Distance to 60 DBA CNEL (Feet)
Jackson St	North of 41st	71/71	<50	63	199	629
Jackson St	41st - 42nd	78/75	100/50	315/158	998/500	3,155/1,581
Jackson St	42nd - Unnamed Street	78/76	100/63	315/199	998/629	3,155/1,991
Jackson St	Unnamed Street - I-10	80/78	158/100	500/315	1,581/998	5,000/3,155
Jackson St	I-10 - 44th	79/77	126/79	397/251	1,256/792	3,972/2,506
Jackson St	44th - 45th	79/78	126/100	397/315	1,256/998	3,972/3,155
Jackson St	45th - Requa	78/77	100/79	315/251	998/792	3,155/2,505
Jackson St	Requa - Dr. Carreon	75/74	50/<50	158/126	500/397	1,581/1,256
Jackson St	Dr. Carreon - 48th	74/73	<50/<50	126/100	397/315	1,256/998
Jackson St	48th - 50th	74/74	<50	126	397	1,256
Jackson St	50th - 52nd	73/73	<50	100	315	998
Jackson St	South of 52nd	72/72	<50	79	251	792
Van Buren	42nd - 44th	73/73	<50	100	315	998
Van Buren	44th and unnamed street	75/74	50/<50	158/126	500/397	1,581/1,256
Van Buren	Unnamed Street - 45th	76/75	63/50	199/158	629/500	1,991/1,581
Van Buren cabazon	From Auto Center - Between Auto Center and Dillon	70/70	<50	50	158	500
Van Buren	Between Auto Center and Dillon - Dillon	69/69	<50	<50	79	629
Van Buren	Grapefruit - 48th	77/77	79	251	792	2,505
Van Buren	48th - 50th	74/74	<50	126	397	1,256
Van Buren	50th - 52nd	72/72	<50	79	251	792
Van Buren	South of 52nd	69/69	<50	<50	79	629
Auto Center Dr	I-10 - 45th	76/75	63/50	199/158	629/500	1,991/1,581
Auto Center Dr	45th - East Valley Pkwy	75/73	50/<50	158/100	500/315	1,581/998
Calhoun St	Hwy 111 - Dr. Carreon	72/72	<50	79	251	792
Calhoun St	Dr. Carreon - 48th	71/71	<50	63	199	629
Calhoun St	48th - 50th	70/70	<50	50	158	500
Calhoun St	50th - 52nd	63/63	<50	<50	<50	100

Table E-5

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA
WITHOUT PROJECT IMPLEMENTATION**

Road Name	Location	CNEL @ 50 Feet From Centerline of Road (DBA)	Distance to 75 DBA CNEL (Feet)	Distance to 70 DBA CNEL (Feet)	Distance to 65 DBA CNEL (Feet)	Distance to 60 DBA CNEL (Feet)
Unnamed Street	North of 44th	67/67	<50	<50	79	251
Harrison St	North of 44th	67/67	<50	<50	79	251
Harrison St	44th - Unnamed Street	64/64	<50	<50	<50	126
Harrison St	Unnamed Street - Grapefruit	68/68	<50	<50	100	315
Dillon	North of 44th	65/65	<50	<50	50	158
Dillon	North of 44th	66/66	<50	<50	63	200
Dillon	44th - 45th	70/70	<50	50	158	500
Dillon	45th - 46th	73/73	<50	100	315	998
Dillon	46th - Unnamed Street	75/75	50	158	500	1,581
Dillon	Unnamed Street - Ramp South of SR-86	76/76	63	199	629	1,991
Dillon	Ramp South of SR-86 - 48th	77/77	79	251	792	2,505
Unnamed street	Washington - Adams	68/68	<50	<50	100	315
38th Ave	Adams - Between Adams and Jefferson	68/69	<50/<50	<50/<50	100/79	315/629
38th Ave	Between Adams and Jefferson - Jefferson	72/72	<50	79	251	792
38th Ave	Jefferson - Madison	71/71	<50	63	199	629
Eastside Dr	Madison - Monroe	71/70	<50/<50	63/50	199/158	629/500
40th Ave	Adams - Jefferson	74/73	<50/<50	126/100	397/315	1,256/998
40th Ave	Jefferson - Madison	75/74	50/<50	158/126	500/397	1,581/1,256
40th Ave	Madison - Monroe	74/73	<50/<50	126/100	397/315	1,256/998
41st Ave	Varner - Madison	72/70	<50/<50	79/50	251/158	792/500
41st Ave	Madison - Unnamed Street	73/70	<50/<50	100/50	315/158	998/500
41st Ave	Unnamed Street - Monroe	65/66	<50/<50	<50/<50	50/63	158/199
41st Ave	Monroe - Jackson	72/71	<50/<50	79/63	251/199	792/629
42nd Ave	Washington - Adams	72/72	<50	79	251	792
42nd Ave	Adams - Country Club	75/75	50	158	500	1,581

Table E-5

**YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA
WITHOUT PROJECT IMPLEMENTATION**

Road Name	Location	CNEL @ 50 Feet From Centerline of Road (DBA)	Distance to 75 DBA CNEL (Feet)	Distance to 70 DBA CNEL (Feet)	Distance to 65 DBA CNEL (Feet)	Distance to 60 DBA CNEL (Feet)
42nd Ave	Varner - Between Varner and Unnamed Street	74/75	<50/50	126/158	397/500	1,256/1,581
42nd Ave	Between Varner and Unnamed Street - Unnamed Street	75/77	50/79	158/251	500/792	1,581/2,505
42nd Ave	Unnamed Street - Monroe	76/77	63/79	199/251	629/792	1,991/2,505
42nd Ave	Monroe - Jackson	76/76	63	199	629	1,991
42nd Ave	Jackson - Van Buren	75/75	50	158	500	1,581
Fred Waring Dr	Washington - Jefferson	71/72	<50/<50	63/79	199/251	629/792
Fred Waring Dr	Jefferson - Burr	70/72	<50/<50	50/79	158/251	500/792
Fred Waring Dr	Burr - Monroe	72/73	<50/<50	79/100	251/315	792/998
Fred Waring Dr	Monroe - East Valley Pkw	70/70	<50	50	158	500
45th Ave	Jackson - Auto Center	72/72	<50	79	251	792
Miles Ave	Washington - Dune Palms	72/72	<50	79	251	792
Miles Ave	Dune Palms - Jefferson	72/73	<50/<50	79/100	251/315	792/998
Miles Ave	Jefferson - Burr	71/72	<50/<50	63/79	199/251	629/792
Miles Ave	Burr - Madison	74/73	<50/<50	126/100	397/315	1,256/998
Miles Ave	Madison - Clinton	72/72	<50	79	251	792
Miles Ave	Clinton - Monroe	72/71	<50/<50	79/63	251/199	792/629
Miles Ave	Monroe - East Valley Pkw	73/72	<50/<50	100/79	315/251	998/792
Requa	Monroe - Arabia	72/69	<50/<50	79/<50	251/126	792/397
Requa	Arabia - Oasis	74/71	<50/<50	126/63	397/199	1,256/629
Requa	Oasis - Jackson	67/73	<50/<50	<50/100	79/315	251/998
46th Ave	Dune Palms - Jefferson	64/66	<50/<50	<50/<50	<50/63	126/199
46th Ave	Shields - Madison	72/73	<50/<50	79/100	251/315	792/998
46th Ave	Madison - Clinton	72/72	<50	79	251	792
46th Ave	Clinton - Monroe	70/71	<50/<50	50/63	158/199	500/629
Hwy 111	Washington - Dune Palms	75/74	50/<50	158/126	500/397	1,581/1,256

Table E-5

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	CNEL @ 50 Feet From Centerline of Road (DBA)	Distance to 75 DBA CNEL (Feet)	Distance to 70 DBA CNEL (Feet)	Distance to 65 DBA CNEL (Feet)	Distance to 60 DBA CNEL (Feet)
Hwy 111	Dune Palms - Madison	73/74	<50/<50	100/126	315/397	998/1,256
Hwy 111	Madison - Clinton	74/75	<50/50	126/158	397/500	1,256/1,581
Hwy 111	Clinton - Monroe	75/75	50	158	500	1,581
Hwy 111	Monroe - Arabia	74/74	<50	126	397	1,256
Hwy 111	Arabia - Oasis	73/74	<50/<50	100/126	315/397	998/1,256
Hwy 111	Oasis - Jackson	74/75	<50/50	126/158	397/500	1,256/1,581
Hwy 111	Jackson - Auto Center	74/74	<50	126	397	1,256
Hwy 111	Auto Center - Calhoun	75/74	50/<50	158/126	500/397	1,581/1,256
Dr. Carreon Blvd	Clinton - Arabia	69/68	<50/<50	<50/<50	126/100	397/315
Dr. Carreon Blvd	Arabia - Oasis	68/64	<50/<50	<50/<50	100/<50	315/126
Dr. Carreon Blvd	Oasis - Jackson	67/63	<50/<50	<50/<50	79/<50	251/100
Dr. Carreon Blvd	Jackson - Calhoun	65/63	<50/<50	<50/<50	50/<50	158/100
Dr. Carreon Blvd	Calhoun - Unnamed Street	65/64	<50/<50	<50/<50	50/<50	158/126
48th Ave	Washington - Dune Palms	71/72	<50/<50	63/79	199/251	629/792
48th Ave	Dune Palms - Madison	75/75	50	158	500	1,581
48th Ave	Madison - Jackson	76/75	63/50	199/158	629/500	1,991/1,581
48th Ave	Jackson - Calhoun	74/74	<50	126	397	1,256
48th Ave	Calhoun - Van Buren	75/75	50	158	500	1,581
49th Ave	Jefferson - Shields	67/67	<50	<50	79	251
49th Ave	Shields - Madison	70/70	<50	50	158	500
49th Ave	Madison - Monroe	67/66	<50/<50	<50/<50	79/63	251/199
49th Ave	Jefferson - Madison	75/75	50	158	500	1,581
49th Ave	Madison - Monroe	76/76	63	199	629	1,991
49th Ave	Monroe - Calhoun	76/75	63/50	199/158	629/500	1,991/1,581
49th Ave	Calhoun Van Buren	76/76	63	199	629	1,991
49th Ave	Van Buren - Harrison	74/74	<50	126	397	1,256
52nd Ave	Washington - Monroe	75/75	50	158	500	1,581
52nd Ave	Monroe - Harrison	76/76	63	199	629	1,991
Varnier Rd	40th - Adams	75/75	50	158	500	1,581

Table E-5

YEAR 2015 ROADS AND VEHICLE STATISTICS WITHIN THE PROJECT AREA WITHOUT PROJECT IMPLEMENTATION

Road Name	Location	CNEL @ 50 Feet From Centerline of Road (DBA)	Distance to 75 DBA CNEL (Feet)	Distance to 70 DBA CNEL (Feet)	Distance to 65 DBA CNEL (Feet)	Distance to 60 DBA CNEL (Feet)
Varner Rd	Adams - Jefferson	73/71	<50/<50	100/63	315/199	998/629
Varner Rd	Jefferson - 41st	74/74	<50	126	397	1,256
I-10	West of Jefferson - Dillon	89/89	1,255	3,972	12,559	39,716
I-10	East of Dillon	84/84	397	1,256	3,972	12,559
SR-86	East of Dillon	83/83	315	998	3,155	9,976
Country Club Dr	Washington - Adams	73/72	<50/<50	100/79	315/251	998/792
Country Club Dr	Adams - 42nd	73/70	<50/<50	100/50	315/158	998/500
Country Club Dr	42nd - Jefferson	75/74	50/<50	158/126	500/397	1,581/1,256
Country Club Dr	Jefferson - Burr	74/74	<50	126	397	1,256
Country Club Dr	Burr - Madison	74/73	<50/<50	126/100	397/315	1,256/998
Country Club Dr	Madison - East Valley Pkwy	69/70	<50/<50	<50/50	126/158	397/500
East Valley Pkwy	I-10 - Jefferson	79/79	126	397	1,256	3,972
East Valley Pkwy	Jefferson - Burr	78/78	100	315	998	3,155
East Valley Pkwy	Burr - Country Club	74/74	<50	126	397	1,256
East Valley Pkwy	Country Club - Clinton	76/76	63	199	629	1,991
East Valley Pkwy	Clinton - Fred Waring	74/75	<50/50	126/156	397/500	1,256/1,581
East Valley Pkwy	Fred Waring - Oasis	76/76	63	199	629	1,991
East Valley Pkwy	Oasis - Miles	73/73	<50	100	315	998
East Valley Pkwy	Miles - Hwy 111	75/74	50/<50	158/126	500/397	1,581/1,256
East Valley Pkwy	Hwy 111 - Unnamed Street	75/75	50	158	500	1,581
East Valley Pkwy	Unnamed Street - Dillon	74/74	<50	126	397	1,256
East Valley Pkwy	Dillon - Harrison	76/76	63	199	629	1,991

¹ First value represents without project while second value represents with project.

² NS - No Street without project implementation.

APPENDIX F

AIR QUALITY

APPENDIX F - AIR QUALITY

F.1 EXISTING CONDITIONS

F.1.1 Meteorology/Climate

The study area lies within the southeastern portion of the Southeast Desert Air Basin (SEDAB), and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SEDAB is composed of the eastern portion of San Bernardino, Riverside, Kern, and San Diego Counties, the northern portion of Los Angeles County, and all of Imperial County.

The climate of the study area is characterized by hot summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. The clouds and fog that form along the southern California coastline rarely extend as far inland as the project area, and if they do, they usually burn off quickly after sunrise.

The Colorado River to the east and a series of high mountain ranges to the west (San Gabriel and San Jacinto) and north (San Bernardino) form a physical and climatological barrier between the SEDAB and the South Coast Air Basin. Therefore, inversion conditions are less favorable in the project area than in the coastal areas of southern California. Inversion conditions are associated with degraded air quality as the surface air is prevented from rising and dissipating air pollutants that accumulate during the day. A second inversion type forms on clear, winter nights when cold air off the mountains sinks to the valley floor while the air aloft over the valley remains warm. This forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants, such as automobile and heavy equipment exhaust emissions, near their source. These nocturnal radiation inversions are very intense throughout the area and create very limited mixing potential at night, especially during the cooler months of the year.

Temperatures in the Indio area vary greatly between the summer and the winter. The nearest climatological monitoring station is located approximately 6 to 7 miles to the southeast in Thermal. The monthly average temperature range from a low of 54.1° F during January to a high of 91.9° F in July. Year-round temperature ranges from 25° to 115° F (Psomas 1991).

Rainfall in the proposed project area varies considerably in both time and space. Almost all of the annual rainfall comes from the fringes of mid-latitude storms from late November to early April with summers often completely dry except for occasional widely scattered thundershowers. The area is located in the arid portion of the Colorado Desert. The Valley's location in the "rainshadow" of the San Gabriel and San Jacinto Mountains further enhances its dryness. Rainfall averages around 2.8 inches per year in the project area.

Winds blow primarily from the west and west-southwest in response to the regional pattern of airflow from the cool ocean to the heated interior. The annual wind speed is 3.8 mph. The onshore dominant daytime winds occur between noon and 7:00 p.m., following the peak travel period (6:00 to 9:00 a.m.) in the Los Angeles and Orange County metropolitan areas. Consequently, during periods of low inversions and low wind speeds, the net transport of air pollutants generated in these highly urbanized areas is predominantly onshore through the Santa Ana Canyon into Riverside County and San Bernardino County.

F.1.2 Air Quality Setting

Ambient Air Quality Standards (AAQS)

Air quality impacts of a proposed project, combined with existing background air quality levels, must be compared to the applicable ambient air quality standards in order to gauge their significance. These standards are the levels of air quality

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considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

National Ambient Air Quality Standards (AAQS) were established under the Clean Air Act Amendment of 1971. States could adopt these standards as promulgated but retained the option to adopt more stringent standards and/or to include other pollution species. California already had standards in existence before federal AAQS was established. Because of unique meteorological problems in the state and because of differences of opinion by medical panels established by the California Air Resources Board and the EPA on pollutant levels which protect susceptible members of the population from adverse health impacts with an adequate degree of safety, there is considerable diversity between state and federal standards currently in effect in California. Those standards currently in effect in California are shown in Table F.2-1.

F.1.3 Baseline Air Quality

Existing levels of ambient air quality and historical trends and projections in the project area are best documented by measurements made by the SCAQMD at its Indio air monitoring station located in the study area. Monitored air pollutants include ozone (O_3) and PM-10 particulates (those particulates with an aerodynamic diameter of 10 microns or 0.0004 inches or less in diameter). Values for carbon monoxide (CO) and nitrogen oxides (NO_x) were ascertained from levels measured at the SCAQMD Palm Springs station, the next nearest station to the project area which monitors these pollutants. Both CO and NO_x levels in the project area would be expected to be even less than those measured in Palm Springs due to lower traffic densities and further displacement from the major urbanized areas. These measurements have shown that both photochemical smog levels (mainly ozone) and dust levels may exceed particulate standards throughout the year and that

primary vehicular pollutant levels such as carbon monoxide, nitrogen dioxide, and lead are very low in the area. Table F.2-2 summarizes the last 5 years of published data for the Indio and (for CO and NO_x) Palm Springs stations.

Table F.2-2 shows that while ozone levels continue to exceed the California and national hourly standards, 1990 and later years showed a decrease in the number of violations even though the maximum hourly concentrations are similar to previous years. Ozone is the result of chemical reactions of primary pollutants with the emphasis on both reactive hydrocarbons and nitrogen dioxides in bright sunlight. Although nitrogen oxides show no exceedences of the standards, they are a precursor to ozone formation which continually does exceed the standards. Therefore, nitrogen oxide emissions are of concern to the area. Hydrocarbons and nitrogen dioxide are emitted by both mobile and stationary sources, with the greater portion emanating from mobile sources in the basin. Pollutants emitted from upwind cities react during their transport downwind to produce the oxidant concentrations measured at the Indio monitoring station. Therefore, upwind areas within the South Coast Air Basin and portions of the Southeast Desert Air Basin contribute to the ozone production with the more significant areas being immediately upwind. These concentrations increase during the summer, with concentrations increasing from the late morning through the afternoon.

With regards to PM-10 particulate matter, the observed levels show the continuance of numerous violations of the state standard and few violations of the federal standard. Suspended particulate matter (both total suspended particulates and PM-10) are a mixture of natural and man-made materials including soil particles, biological materials, sulfates, nitrates, organic compounds, and lead. High dust levels result from strong winds acting on loose, arid soil and from the high degree of agricultural activity. Much of this dust burden is in the form of large, heavy particles which settle out of the air in proximity to their origin. These larger particles are filtered out by the respiratory system and pose more of a nuisance than a health threat. Smaller particles (PM-10) are created by the combustion of fossil fuels, but are also given off from tire wear and brake dust. Further, approximately 36 percent of the silt content within the dust which is raised during high

Table F.2-1

AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone	1 Hour	>0.09 ppm (180 ug/m³)	Ultraviolet Photometry	>0.12 ppm (235 ug/m³)	Same as Primary Std.	Ethylene Chemiluminescence
Carbon Monoxide	8 Hour	>9.1 ppm (10 mg/m³)	Non-dispersive Infrared Spectroscopy (NDIR)	≥9.5 ppm (10 mg/m³)	Same as Primary Stds.	Non-dispersive Infrared Spectroscopy (NDIR)
	1 Hour	>20 ppm (23 mg/m³)		>35 ppm (40 mg/m³)		
Nitrogen Dioxide	Annual Average	-	Gas Phase Chemilumi- nescence	>0.0534 ppm (100 ug/m³)	Same as Primary Std.	Gas Phase Chemiluminescence
	1 Hour	>0.25 ppm (470 ug/m³)		-		
Sulfur Dioxide	Annual Average	-	Ultraviolet Fluorescence	0.03 ppm (80 ug/m³)	-	Pararosaniline
	24 Hour	0.05 ppm (131 ug/m³)		0.14 ppm (365 ug/m³)	-	
Suspended Particulate Matter (PM-10)	Annual Geometric Mean	30 ug/m³	Size Selective Inlet High Volume Sampler and Gravimetric Analysis	-	-	-
	24 Hour	>50 ug/m³	-	>150 ug/m³	Same as Primary Stds.	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	-		>50 ug/m³		
Sulfates	24 Hour	≥25 ug/m³	Turbidimetric Barium Sulfate	-	-	-
Lead	30-Day Average	≥1.5 ug/m³	Atomic Absorption	-	-	Atomic Absorption
	Calendar Quarter	-		≥1.5 ug/m³	Same as Primary Std.	
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70 percent		-	-	-

* Prepared in accordance with applicable SCAQMD Air Quality Data Cards and ARB Fact Sheet 38 (revised 7/88).

Table F.2-2

**AIR QUALITY MONITORING SUMMARY FOR
THE INDIO MONITORING STATION¹**
(Number of Days Standards Were Exceeded and
Maximum Levels During Such Violations)

Pollutant/Standard	1988	1989	1990	1991	1992
Ozone 1-hour > 0.09 ppm	1 ²	76	47	48	45
Ozone 1-hour > 0.12 ppm	0	16	10	13	8
Ozone Max. 1-hour conc. (ppm)	0.11	0.16	0.16	0.18	0.14
Carbon Monoxide 8-hour \geq 9.5 ppm	0	0	0	0	0 ²
Carbon Monoxide 1-hour > 35 ppm	0	0	0	0	0 ²
Carbon Monoxide 8-hour \geq 9.1 ppm	0	0	0	0	0 ²
Carbon Monoxide 1-hour > 20 ppm	0	0	0	0	0 ²
Carbon Monoxide Max. 1-hour conc. (ppm)	4	6	5	5	5 ²
Carbon Monoxide Max. 8-hour conc. (ppm)	2.14	2.9	2.3	2.5	2.4 ²
Nitrogen Dioxide 1-hour > 0.25 (ppm)	0	0	0	0	0 ²
Nitrogen Dioxide Max. 1-hour conc. (ppm)	0.11	0.09	0.09	0.09	0.09 ²
Total Suspended Particulates Max. 24-hour conc. (ug/m ³)	309	1,465	1,485 ²	NM ³	NM
Particulate Sulfate 24-hour \geq 25 ug/m ³	0	0	0 ²	NM	NM
Particulate Sulfate Max. 24-hour conc. (ug/m ³)	8.4	18.3	7.0 ²	NM	NM
Particulate Lead 1-Month \geq 1.5 ug/m ³	NM	NM	NM	NM	NM
Particulate Lead Max. 1-month (ug/m ³)	NM	NM	NM	NM	NM

Table F.2-2

**AIR QUALITY MONITORING SUMMARY FOR
THE INDIO MONITORING STATION¹
(Number of Days Standards Were Exceeded and
Maximum Levels During Such Violations)**

Pollutant/Standard	1988	1989	1990	1991	1992
Inhalable Particulates (PM-10) ⁴ 24-hour > 50 ug/m ³	22/61	39/58	41/59	37/59	18/59
Inhalable Particulates (PM-10) ⁴ 24-hour > 150 (ug/m ³)	0/61	4/58	4/59	3/59	0/59
Inhalable Particulates (PM-10) Max. 24-hour conc. (ug/m ³)	115	712	520	340	117

Source: Air Quality Data. SCAQMD, 1988, 1989, 1990, 1991, & 1992

¹ Carbon monoxide and nitrogen dioxide are as monitored in Palm Springs and may not be truly representative of the project area.

² Less than 12 full months of data. May not be representative.

³ NM - Not monitored

⁴ Violations per number of samples

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wind episodes and earth movement consists of this PM-10 material (AP-42, Section 11.2.1).

All other pollutants, particularly those related to vehicular source emissions such as CO and NO_x, have not exceeded their allowable levels at the Palm Springs station and would not be expected to exceed these levels in Indio.

The data in Table F.2-2 suggest that, with the exception of particulates, air quality problems in the study area are mainly due to the transport of pollutants into the area from outside sources. These data also suggest that the project area is very sensitive to additional particulate pollutant emissions, especially PM-10 particulates since these standards are already frequently exceeded.

F.1.4 Vehicle Emissions

Because vehicle emissions are the largest source of air emissions in the South Coast Air Basin, quantification of their contribution to the existing ambient conditions is warranted. Based on the City of Indio General Plan Program Circulation Element Traffic Study by Robert Kahn, John Kain & Associates, Inc. (1993) (Kahn), in 1992 approximately 812,538 total trip ends were generated in the project area. In accordance with the SCAQMD CEQA Air Quality Handbook (1993) (Handbook) the average distances for work trips is 17.5 miles per trip-end while non-work trips are 8.3 miles per trip-end for Riverside County. Furthermore, the 1993 percentage of work and non-work trips are approximately 38.8 and 61.2 percents, respectively. Therefore, an average trip-end is calculated at 11.9 miles. The total mileage generated in the project area is then calculated at 9,669,202 miles per day. The emissions for this travel were ascertained using the EMFAC7EP model runs contained within the Handbook. A composite vehicle emissions profile was prepared for 1993 using 86.04 percent automobiles, 9.94 percent trucks, 4.00 percent motorcycles, and 0.02 percent buses, all in accordance with the Handbook for Riverside County vehicle use in 1993. Also in accordance with the Handbook, a composite of 51.9 percent of these vehicle trips would realize cold starts while the remaining 48.1 percent would be from hot starts. The extrapolated average speed for Riverside County in 1993 is 38.7 mph. Due to the remoteness of the Indio area, and the fact that the

EMFAC model is calibrated in 5 mph increments, an average speed of 40 mph was used for modeling purposes. Table F.2-3 presents the emissions produced from the use of these vehicles, by type.

Air Quality Management Plan

The proposed project is located within the South Coast Air Basin (SCAB) and is jurisdictionally governed by the California Air Resources Board (CARB). In 1976 the California Legislature adopted the Lewis Air Quality Management Act which created the SCAQMD. This agency was charged with developing uniform plans and programs for the region to attain federal standards by the dates specified in the federal law and provides technical and monitoring support, as well as an enforcement of rules and regulations. The District was also mandated to meet state standards by the earliest date achievable using reasonably available measures.

In accordance with the State Lewis-Presley Air Quality Act (1987) and the Federal Clean Air Act Amendment (1970), a revised Air Quality Management Plan (AQMP) was adopted by the governing boards of the SCAQMD and the Southern California Association of Governments (SCAG) in March of 1989. The AQMP contained far reaching programs to improve air quality. The Plan, governed by state and federal laws, was to achieve healthful levels of air quality. The overall goal was to improve air quality by 5 percent per year and attain all ambient air quality standards (AAQS) by the year 2007.

Realizing that the goals of the 1989 AQMP would be unattainable in the referenced time frame, a new AQMP was adopted on July 12, 1991. The new AQMP has many recommended measures that will affect the lifestyle of nearly everyone in the basin. The 1991 AQMP differs from the 1989 AQMP in several ways. Because vehicle emissions are among the greatest contributors to local air quality standard violations, the Growth Management Measure was revised to focus on the reduction of vehicle miles traveled rather than the previous jobs/housing balance performance goals. Other changes include the implementation of the following measures:

- Extensive use of clean fuels,

Table F.2-3

**EXISTING AIR POLLUTION EMISSIONS FOR
INDIO PLANNING AREA VEHICLES¹**

Pollutant	Automobile Emissions (Lb/day)²	Truck Emissions (Lb/day)³	Motorcycle Emissions (Lb/day)⁴	Total Vehicle Emissions (Lb/day)
Carbon Monoxide	167,743	29,402	10,607	207,752
Nitrogen Oxides (NOx as NO ₂)	15,294	13,388	842	29,524
Reactive Organics	13,050	3,032	2,172	18,254
Sulfur Oxides (SOx as SO ₂)	1,283	933	<1	2,217
Particulate Matter ⁵	2,016	764	51	2,831

¹ Based upon 1993 composite vehicle emission factors and an average speed of 40 MPH. Also assumes 51.9 percent cold starts and 48.1 percent hot starts for each vehicle class. Mobile vehicle emissions factors are as modeled using the EMFAC7EP model results as included in the SCAQMD CEQA Air Quality Handbook (1993).

² Includes 699,108 trip-ends and 8,319,385 running miles.

³ Includes both trucks and busses. Includes 80,929 trip-ends and 963,055 running miles.

⁴ Includes 32,502 trip-ends and 386,774 running miles.

⁵ Includes exhaust and tire wear PM-10 particulate matter.

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- ▶ Rapid introduction of clean vehicles,
- ▶ Conserving natural gas and electricity,
- ▶ Reducing emissions from all sources, and
- ▶ Reducing vehicle miles traveled and trips taken.

The goal of the 1991 Plan is to reach federal attainment for CO, NO₂, PM-10, and ozone in the years 2000, 2000, 2006, and 2010, respectively. The state standards for attainment differ from the federal standards. For these standards, the anticipated attainment for CO and NO₂ are by the years 2005 and 2000, respectively. The state standards for PM-10 and ozone will not be met until beyond the year 2010.

F.2 IMPACTS

Adoption of the General Plan provides the local agencies with ongoing information assuring local decision-makers that they are making real contributions to clean air goals contained in the 1991 AQMP and PM-10 Plan. It is then the purpose of this EIR to present the potential impacts associated the goals of the adopted General Plan.

Air quality concerns can be divided into short- and long-term impacts. Short-term impacts are typically associated with construction and grading activities necessary in the course of developing the various identified land uses. Long-term impacts are typically associated with build-out conditions. These emissions are then further divided into stationary and mobile sources.

F.2.1 Significance Criteria

The SCAQMD is the governing agency and sets significance criteria for air emissions from new sources within the South Coast Air Basin in which the city of Indio is located. These emissions are also under the jurisdiction of the California Ambient Air Quality Standards (CAAQS) as well as the less stringent National Ambient Air Quality Standards (NAAQS). For the purposes of this document, air quality impacts are considered significant if they:

- ▶ Exceed daily emission criteria established by the SCAQMD. For operational emissions in the Coachella Valley these levels are as follows:

CO - 550 Lbs/day
NOx - 100 Lbs/day
ROG - 75 Lbs/day
SOx - 150 Lbs/day
PM-10 - 150 Lbs/day

However, since a project's impact is limited during the construction phase, a different set of criteria are used. For construction, impacts are considered significant if the following levels are exceeded:

CO - 24.75 tons/quarter
NOx - 2.5 tons/quarter
ROG - 2.5 tons/quarter
SOx - 6.75 tons per quarter
PM-10 - 6.75 tons/quarter

Regardless of the quarterly levels, if construction emissions on an individual day exceed 550 pounds per day for CO, 100 pounds per day for NOx, 75 pounds per day for ROG, or 150 pounds per day for PM-10, they are considered as significant.

- ▶ Result in emissions that exacerbate existing air quality conditions where air quality standards are already exceeded or result in exceedance of air quality standards.
- ▶ Create air emissions which exceed either the CAAQS or NAAQS.
- ▶ Violate County Rule 402 (Nuisance) or Rule 403 (Fugitive Dust).
- ▶ Violate City of Indio Ordinance No. 1138 for fugitive dust.

F.2.2 Short-Term Impacts

Exhaust Emissions

Construction equipment will create exhaust pollutants from onsite earth movement and from equipment bringing concrete and other building materials to the site. With regard to nuisance odors, air quality

impacts are typically confined to the immediate vicinity of the equipment itself. By the time such emissions reach any sensitive receptor sites away from the project site, they are usually diluted to well below any level of air quality concern. An occasional "whiff" of diesel exhaust from trucks accessing a construction site from public roadways may result. Such brief exhaust odors are an adverse, but not significant, air quality impact.

Temporary impacts will result from project construction activities within the General Plan areas proposed for development. Grading and construction activities will consume diesel fuel and thereby produce combustion by-products. Because there is currently no way of knowing the level of construction that could occur under the General Plan at any one time, this analysis focuses on the various emissions associated with the construction of the various types of land uses and therefore aides the regulatory agencies in determining if an individual project would potentially exceed the daily significance criteria set forth by the SCAQMD. The quantities of emissions released can be estimated from screening data presented by the SCAQMD in the Handbook and presented below in Table F.2-4. The daily emissions rate is then calculated as follows:

1. The project's square footage is determined.
2. This area is then divided by 1,000.
3. This resultant value is multiplied by the emissions factors presented in Table F.2-4.
4. This value is then divided by the number of days necessary to construct the project.

If this resultant value exceeds the daily emissions criteria presented above, the project is deemed to have a significant impact for daily emissions. It should be noted that this analysis serves for screening purposes only and actual emissions should be determined on an individual basis through the CEQA, and where applicable, NEPA processes.

Another way to gauge the potential daily impact from construction equipment is to examine the maximum amount of equipment that can operate on a daily basis before the daily threshold levels are exceeded. The Handbook presents these data for screening purposes to determine if a project is potentially

significant. These data are presented by equipment type in Table F.2-5 and by horsepower rating in Table F.2-6. Again, these data are for screening purposes and individual projects should undergo analysis to determine their emissions contributions. Additionally, these data do not include other emissions such as worker commutes and haul trips that must also be considered in the daily threshold levels.

Fugitive Dust

Site clearing, grading, and equipment travel on unpaved surfaces will generate considerable quantities of fugitive dust during the development of most projects. As with exhaust emissions, there is currently no way of knowing the level of construction to be performed at any one time. Therefore, this analysis focuses on the maximum amount of construction which can proceed at any one time before a significant impact would be anticipated. AP-42 (EPA 1985) estimates that each acre of land disturbed generates 1.2 tons per month (110 pounds per day) of total suspended solids (or PM-30) particulate matter from dust lofting into the air. This value will vary with soil moisture, silt content, wind speed, and several other factors. The unhealthful, regulated PM-10 fraction typically consists of 45 percent of the PM-30 fraction. Based on the SCAQMD threshold value of 150 pounds of PM-10 on a daily basis, as many as 3 acres could be under active construction on a daily basis without creating a significant impact. Twice daily watering (required by SCAQMD Rule 403 and an accepted measure in accordance with the city of Indio Ordinance No. 1138) typically implemented on any sizable construction job, can reduce this value by at least 50 percent which would raise the allowable area of construction to about 6 acres per day. Active construction on a larger area could produce a significant impact.

However, active construction is not the only producer of dust during construction. Table F.2-7 lists those sources commonly associated with dust production as well as the quantities produced.

In accordance with CEQA all emissions must be considered as a whole. Accordingly, these values presented for fugitive dust must then be combined with the PM-10 particulates predicted from exhaust

Table F.2-4

SCREENING TABLE FOR ESTIMATING TOTAL CONSTRUCTION EMISSIONS¹

Land Use	Unit of Measure	Emission Factors (Lbs/Construction Period)			
		CO	NOx	ROG	PM-10
RESIDENTIAL					
Single Family Housing	1,000 sq. ft GFA ²	75.62	347.74	23.66	24.69
Apartments	1,000 sq. ft GFA	70.22	322.90	21.97	22.93
Condominiums	1,000 sq. ft GFA	68.06	312.97	21.30	22.22
Mobile Homes	1,000 sq. ft GFA	68.06	312.97	21.30	22.22
EDUCATION					
Schools	1,000 sq. ft GFA	150.16	690.52	46.99	49.03
COMMERCIAL					
Business Park	1,000 sq. ft GFA	177.17	814.72	55.44	57.85
Day Care Center	1,000 sq. ft GFA	101.55	466.97	31.78	33.16
Discount Store	1,000 sq. ft GFA	101.55	466.97	31.78	33.16
Fast Food	1,000 sq. ft GFA	101.55	466.97	31.78	33.16
Government Office Complex	1,000 sq. ft GFA	177.17	814.72	55.44	57.85
Hardware Store	1,000 sq. ft GFA	101.55	466.97	31.78	33.16
Hotel	1,000 sq. ft GFA	132.87	611.04	41.58	43.39
Medical Office	1,000 sq. ft GFA	177.17	814.72	55.44	57.85
Motel	1,000 sq. ft GFA	132.87	611.04	41.58	43.39
Movie Theater	1,000 sq. ft GFA	101.55	466.97	31.78	33.16
Office	1,000 sq. ft GFA	177.17	814.72	55.44	57.85
Resort Hotel	1,000 sq. ft GFA	132.87	611.04	41.58	43.39
Restaurant	1,000 sq. ft GFA	101.55	466.97	31.78	33.16
Shopping Center	1,000 sq. ft GFA	101.55	466.97	31.78	33.16
Supermarket	1,000 sq. ft GFA	101.55	466.97	31.78	33.16

Table F.2-4

SCREENING TABLE FOR ESTIMATING TOTAL CONSTRUCTION EMISSIONS¹

Land Use	Unit of Measure	Emission Factors (Lbs/Construction Period)			
INDUSTRIAL					
All Major Uses	1,000 sq. ft GFA	104.79	481.88	32.79	34.22
¹ Construction emissions include onsite construction equipment and worker's travel.					
² GFA - Gross floor area.					

Table F.2-5

**NUMBER OF PIECES OF CONSTRUCTION EQUIPMENT THAT CAN BE
OPERATED ON A DAILY BASIS THAT WILL NOT EXCEED THE SCAQMD
DAILY SIGNIFICANCE THRESHOLD BY TYPE**

Equipment Type	Gasoline-Powered	Diesel-Powered
Determining Factor	Carbon Monoxide Threshold (550 Lb/day)	Nitrogen Oxides Threshold (100 Lb/day)
Wheeled Loader	4	6+ ¹
Wheeled Tractor	7	9+
Roller	5	14
Fork Lift - 50 Hp	4	28
Fork Lift - 175 Hp	4+	8
Trucks (Off-highway)	—	3
Tracked Loader	—	15
Tracked Tractor	—	9+
Scraper	—	3+
Motor Grader	5+	17
Miscellaneous	4	7

¹ Based on 8 hours of operation per day at 100 percent load factor.

² + - An additional piece of equipment in this category may be operated for 4 hours or less per day and remain below the SCAQMD threshold levels for this equipment category

Table F.2-6

**NUMBER OF PIECES OF CONSTRUCTION EQUIPMENT THAT CAN BE
OPERATED ON A DAILY BASIS THAT WILL NOT EXCEED THE SCAQMD
DAILY SIGNIFICANCE THRESHOLD BY HORSEPOWER**

Engine Category (By Horsepower)	Maximum Hours Per Day¹	No. of Units for an 8-Hour Work Day
40 - 69.9	79	10
70 - 89.9	57	7
90 - 99.9	49	6
100 - 150.9	34	4
151 - 199.9	28	3
200 - 299.9	21	2
300 - 499.9	13	1
500 - 799.9	9	1
800 - 1337.0	4	--

¹ Based on a 100 percent load factor.

Table F.2-7

COMMON SOURCES OF PM-10 DUST AND THEIR EMISSION FACTORS

Land Use	Unit of Measure	Lbs of PM-10 per day
UNPAVED ROADS		
Passenger Vehicle	VMT ¹	5.56
Loaded Truck	VMT	23.00
PAVED ROADS		
Local Road	VMT	0.33
Construction Road	VMT	2.00
DEMOLITION	Cubic foot	0.00042
GRADING	Acres/day	49.5 ²
ASBESTOS	Cubic foot	0.00007
¹ VMT - Vehicle miles traveled. This is a function of linear road length and average daily trips. Any combination that equals or exceeds the daily and quarterly thresholds could be significant. ² This value is calculated directly from AP-42 and varies from the SCAQMD Handbook which is presented as 55 pounds per day.		

and the resultant value must be gauged against the daily significance criteria.

In addition to respiratory problems, this dust creates a soiling nuisance as the material settles out on parked cars and other horizontal surfaces. Regular watering and other dust abatement procedures, implemented as a normal part of construction activity, will aide in the control this nuisance. This soiling impact is therefore considered potentially adverse, but not usually significant.

Miscellaneous Emissions

As of late, the SCAQMD has come to realize that all construction emissions are not produced from heavy equipment, mobile sources, and dust. Therefore, more emphasis is continually being placed on the inclusion and quantification of other emissions that also produce reactive organic gases (ROG), a precursor for photochemical smog. Of these other emissions sources, those considered to have the potential for the greatest impact are from:

- ▶ Onsite paving.
- ▶ The application of paints and architectural coatings.
- ▶ Increased emissions from the storage and transfer of diesel for project-related construction vehicles and gasoline for worker vehicles.

These are addressed below:

Onsite Paving

In addition to equipment emissions produced during any paving operations, the application of asphalt has the potential to release large quantities of volatile organic constituent (VOC) emissions if cutback asphalt is used. These VOC emissions are also considered as ROG emissions.

This analysis assumes that 6 inches of asphalt will be applied over a 6 inch base of aggregate. A worst case scenario assumes the use of rapid cure cutback asphalt. The diluent, naphtha, typically comprises 35 percent of the total volume. Based on the methodology presented in AP-42, Section 4.5-2, VOC emissions comprise roughly 24 percent by

weight of the total volume. Using a weight of 3,375 pounds per cubic yard, each cubic yard of asphalt placed will generate roughly 810 pounds of VOCs. Approximately 90 percent of the VOCs will evaporate within the first month and 95 percent will evaporate in 3 to 4 months. With the exception of using a different type of asphalt, no controls are available to preclude these emissions.

Though the quantity of VOCs released could be construed as a temporary significant impact, for construction, the paving of a dirt surface has the long-term beneficial effect of reducing PM-10 emissions for the subsequent operation and is typically considered a mitigation measure. Thus, though adverse, these emissions are typically not considered as significant.

In addition to the emissions produced by the degassing of the asphalt, additional truck trips will be necessary for its delivery. As asphalt must be applied hot, the radius in which the asphalt can be delivered is limited. Assuming the paving of one acre per day, 1,613 cubic yards or 2,756 tons of asphalt and base would be applied. Assuming that an asphalt delivery is 22 tons per truck, 125 round-trip hauls or 2,500 miles would be traveled each day during paving operations. The emissions associated with this travel will ultimately depend on the year in which this paving is performed because the emissions produced per mile of travel go down on a yearly basis as vehicles emission standards improve. Still, these emissions must be included in all CEQA documents reviewed by the city.

The Application of Paints and Architectural Coatings

The use of solvents in the cleaning and painting of the structures will generate VOC emissions. Chambers Group has developed methodology for the calculation of the area to be coated for both residential and commercial/industrial facilities which has been adopted by the SCAQMD and is presented in the Handbook. Based on this methodology, it has been determined that for residential development the surface area to be coated is 2.7 times the floor area. For commercial and industrial applications the value is reduced to 2.0 times the floor area. This will vary on a project-by-project basis, but serves for agency screening purposes.

AIR QUALITY

Based on SCAQMD Rule 1113, architectural coatings can produce no more than 2.08 pounds of volatile emissions per gallon applied. Table F.2-8 has been developed as a screening measure to gauge the emissions produced from coating operations. The table presents emissions for an application thickness of one millimeter of coating. The emissions must then be converted to the desired thickness. In accordance with the Handbook, wood and metal surfaces typically receive about 1 to 4 mils of coating whereas concrete and masonry receive 5 to 30 mils.

► Storage and Transfer of Fuels

The storage and transfer of diesel for construction equipment is not expected to add substantially to construction-generated air emissions. AP-42 lists transfer operations for diesel loading from tank trucks as 0.03 pounds per 1,000 gallons transferred. Due to the low Reid vapor pressure of diesel, evaporative losses from on and offsite diesel storage are even lower. However, the transfer of this fuel into storage tanks will produce an additional 0.014 pounds of ROG per 1,000 gallons. Construction equipment has a typical fuel consumption of approximately 10 gallons per hour while heavy trucks are currently estimated at 5.9 miles per gallon (mpg). (This latter value will increase linearly to 6.7 mpg in 2010 as trucks are designed to operate more efficiently in the future.)

Gasoline will also be necessary for worker vehicles. In accordance with the methodology presented in AP-42, the dispensation of this fuel will produce approximately 1.8 pounds of ROG per 1,000 gallons. Furthermore, the storage of this fuel in underground tanks at service stations will produce 1.0 pound of ROG for every 1,000 gallons dispensed and the filling of these underground tanks will contribute an additional 0.3 pounds per 1,000 gallons. (These emissions will be reduced in future years as low emissions gasolines are refined and better methods of vapor recovery are installed.) Therefore, 3.1 pounds of emissions will be produced for every 1,000 gallons dispensed. The current estimate for automobiles and light trucks is 25 mpg but this value will continue to rise over time to about 33 mpg in 2010. These values are considered insignificant for a typical construction project and will not of themselves adversely affect the local air quality. However, all construction emissions must be considered as a whole and if the level of ROG from

fueling operations causes daily emissions to exceed the daily ROG threshold, a significant impact would be anticipated.

Summary

Construction is anticipated to generate significant short-term impacts especially in light of the proposed SCAQMD significance thresholds currently in effect. These impacts are unavoidable and must be mitigated to the maximum extent feasible.

F.2.4 Long-Term Impacts

Long-term impacts are produced by both mobile and stationary sources. Each of these is addressed below.

Mobile Source Impacts

The main source of emissions in the city of Indio now and in the future is motor vehicles. In accordance with the traffic report produced by Kahn, approximately 1,497,282 total trip-ends will be generated within the General Plan Study area in the year 2015. This represents an increase of approximately 84 percent over the existing conditions.

Estimates of the vehicular emissions generated from these trips were made based on the EMFAC7EP model runs presented in the Handbook. Traffic projections were provided by Kahn and were developed from the various proposed land uses. These projections were used to model future vehicle emissions in the year 2015. As the Handbook only presents vehicle speeds for 1987 and 2010, year 2015 speeds were extrapolated. This give an average vehicle speed of 30 mph in the year 2015. Additionally, the average trips length was also extrapolated from data presented for these years. Based on this procedure, by the year 2015 work trip-ends will decrease to 16.8 miles while non-work trip-ends will increase to 10.0 miles for the Riverside County area. Furthermore, the percentage of work trips will increase to 38.91 percent while non-work trips will decrease to 61.09 percent. Finally, the percentage of vehicle types was extrapolated and is 86.36 percent automobiles, 9.99 percent trucks, 3.96 percent motorcycles, and 0.02 percent busses.

Table F.2-8

**EMISSIONS ASSOCIATED WITH THE APPLICATION OF
ARCHITECTURAL COATINGS**

Application Method	Unit of Measure	ROG Emissions
RESIDENTIAL		
Air Atomized Spray	1,000 sq. ft GFA ¹	28.8 Lb/mil ²
High Volume Low Pressure Spray	1,000 sq. ft GFA	12.2 Lb/mil
Hand Application	1,000 sq. ft GFA	8.6 Lb/mil
COMMERCIAL AND INDUSTRIAL		
Air Atomized Spray	1,000 sq. ft GFA	21.3 Lb/mil
High Volume Low Pressure Spray	1,000 sq. ft GFA	9.0 Lb/mil
Hand Application	1,000 sq. ft GFA	6.4 Lb/mil
¹ GFA - Gross floor area.		
² Pounds of ROG per millimeter thickness of coating applied.		

AIR QUALITY

Table F.2-9 presents the emissions produced by these vehicles, by type.

A comparison between Tables F.2-3 and F.2-9 shows that even though vehicle usage is anticipated to rise by 84 percent, CO and NO_x emissions will be reduced by approximately 27 and 18 percent, respectively. On the other hand, ROG, SO_x, and PM-10 levels will increase by 0.4 percent, 30 percent, and 75 percent, respectively.

Mobile Emission Microscale Impacts

Sensitivity analysis is typically conducted to determine the potential for CO "hot spots" in the project vicinity when traffic conditions exceed a Level of Service (LOS) C. The traffic analysis provided by Kahn does not present intersection movements, and if it did they would be very speculative at this time. The traffic analysis depicts roadway improvements as well as strategies aimed at the reduction in traffic congestion with the underlying assumption that smooth traffic flow will aid in the alleviation of vehicle-produced air contaminants. The analysis points out that very few roads and intersections will exceed LOS C in 2015. The analysis goes on to provide mitigation to ensure that the LOS does not degrade over time and traffic movement is not expected to create hotspots in exceedance of the state or federal standards.

Stationary Source Emissions

In addition to mobile-generated emissions, air emissions are also associated with stationary sources. These include a wide variety of operations to numerous and varied to be wholly included here. These indirect impacts, though individually small, can make a substantial contribution to regional air quality when summed for the county overall. These secondary impacts include:

- ▶ Fossil fuel combustion in county power plants to produce electrical energy used at the project site.
- ▶ Onsite combustion of natural gas used for heating, hot water, and cooking.
- ▶ Evaporative emissions from storage and dispensation of fuel for project-related vehicles.

- ▶ Combustion emissions from the use of mowers, edgers, blowers, and other landscape utility equipment.

Each of these emissions sources is addressed below.

Offsite Electricity Generation Emissions

The SCAQMD has compiled average usage and emissions factors for the consumption of electrical energy for the various types of land uses. Because impact significance is based on a daily basis the SCAQMD table, which presents yearly electrical usage, has been extrapolated to a daily usage rate and is presented in Table F.2-10. Table F.2-11 is then used to determine the amount of pollutants associated with the production of this electricity.

In accordance with the proposed land uses presented in the traffic analysis, by the year 2015 the city will contain 65,216 dwelling units, 1,649.1 acres of commercial land uses, 1,262.5 acres of industrial land uses, 736.8 acres of public and institutional land uses, 2,072.8 acres of recreational and open space, and 81.7 acres of mixed use. Combined, these land uses are estimated to use approximately 6,261,000 kilowatt-hours of electricity on a daily basis. The emissions for the generation of electricity are presented in Table F.2-12.

Onsite Gas Combustion Emissions

As with electrical consumption, the use of natural gas is dependant on the type of structure. SCAQMD lists the typical rate of consumption for natural gas on a monthly basis in the Handbook. Again, because the significance of a project is based on a daily basis, this table has been converted to daily usage and is presented in Table F.2-13. Based on the types of land uses and acreages presented for the consumption of electricity, above, approximately 31,770,000 cubic feet of natural gas would be utilized in the planning area on a daily basis. Table F.2-14 is then used to determine the emissions associated with this combustion and the result is included in Table F.2-12.

Table F.2-9

**YEAR 2015 AIR POLLUTION EMISSIONS FOR INDIO
PLANNING AREA VEHICLES¹**

Pollutant	Automobile Emissions (Lb/day) ²	Truck Emissions (Lb/day) ³	Motorcycle Emissions (Lb/day) ⁴	Total Vehicle Emissions (Lb/day)
Carbon Monoxide	107,976	20,036	24,365	152,377
Nitrogen Oxides (NOx as NO ₂)	6,082	16,784	1,443	24,309
Reactive Organics	1,399	3,881	5,040	18,320
Sulfur Oxides (SOx as SO ₂)	1,801	1,090	<1	2,892
Particulate Matter ⁵	3,782	1,070	99	4,951

¹ Extrapolated to a 2015 composite vehicle emission factor and an average speed of 30 MPH. Also assumes 52.85 percent cold starts and 47.15 percent hot starts for each vehicle class. Mobile vehicle emissions factors are as modeled using the EMFAC7EP model results as extrapolated from the SCAQMD Air Quality Handbook (1993).

² Includes 1,293,054 trip-ends and 16,351,806 running miles.

³ Includes both trucks and busses. Includes 144,936 trip-ends and 1,832,843 running miles.

⁴ Includes 59,292 trip-ends and 749,800 running miles.

⁵ Includes exhaust and tire wear PM-10 particulate matter.

Table F.2-10**ELECTRICITY USAGE FOR VARIOUS TYPES OF LAND USES**

Land Use Type	Unit of Measure	Daily Usage Rate¹
Residential	Kilowatt-hour/Unit/Day	15.415
Food Store	Kilowatt-hour/Square foot/day	0.146
Restaurant	Kilowatt-hour/Square foot/day	0.130
Hospitals	Kilowatt-hour/Square foot/day	0.059
Retail	Kilowatt-hour/Square foot/day	0.037
College/University	Kilowatt-hour/Square foot/day	0.032
High School	Kilowatt-hour/Square foot/day	0.029
Elementary School	Kilowatt-hour/Square foot/day	0.016
Office	Kilowatt-hour/Square foot/day	0.035
Hotel/Motel	Kilowatt-hour/Square foot/day	0.027
Warehouse	Kilowatt-hour/Square foot/day	0.012
Miscellaneous	Kilowatt-hour/Square foot/day	0.029
¹ Average for Southern California Edison and Los Angeles Department of Water and Power.		

Table F.2-11

**EMISSION FACTORS FOR CRITERIA POLLUTANTS FROM
THE PRODUCTION OF ELECTRICITY**

Pollutant Type	CO	NOx	ROG	SOx	PM-10
Pounds per Megawatt-Hour	0.20	0.01	1.15	0.12	0.04

Table F.2-12

**FUTURE SECONDARY AIR POLLUTION EMISSIONS
FOR THE INDIO PLANNING AREA**

Pollutant	Electricity Emissions (Lb/day)¹	Natural Gas Emissions (Lb/day)²	Storage and Dispensati on of Fuels (Lb/day)³	Landscape Maintenance (Lb/day)⁴	Total Daily Emissions (Lb/day)
Carbon Monoxide	1,252	635	NA ⁵	5,162	5,152
Nitrogen Oxides (NOx as NO ₂)	7,200	3,281	NA	52	10,533
Reactive Organics	63	168	1,669	739	2,639
Sulfur Oxides (SOx as SO ₂)	751	Negligible	NA	7	758
Particulate Matter ⁵	250	6	NA	19	275

¹ Based upon emission factors presented in the SCAQMD CEQA Air Quality Handbook, 1993 for the use of 6,261,000 kilowatt-hours of electricity on a daily basis.

² Based upon emission factors presented in the SCAQMD CEQA Air Quality Handbook, 1993 for the use of 31,770,000 cubic feet of natural gas on a daily basis.

³ Based upon the storage and dispensation of 534,425 gallons of gasoline and 261,835 gallons of diesel.

⁴ Based upon the use of 7,820 horsepower-hours per day and 90% use of 4-stroke and 10% use of 2-stroke lawn and garden equipment. Emissions factors are as presented in AP-42, September 1985.

⁵ NA - Not applicable. This pollutant is not associated with this operation.

Table F.2-13**NATURAL GAS USAGE FOR VARIOUS TYPES OF LAND USES**

Land Use Type	Unit of Measure	Daily Usage Rate
Residential Single Family Units	Cubic Feet/Unit/Day	222.167
Residential Multi-Family Units	Cubic Feet/Unit/Day	133.717
Industrial	Cubic Feet/Parcel/Day	97,986.667
Hotel/Motel	Cubic Feet/Square Foot/Day	0.160
Retail/Shopping Centers	Cubic Feet/Square Foot/Day	0.097
Office	Cubic Feet/Square Foot/Day	0.067

Table F.2-14

**EMISSION FACTORS FOR CRITERIA POLLUTANTS FROM
THE COMBUSTION OF NATURAL GAS**

Pollutant Type	CO	NOx	ROG	SOx	PM-10
Pounds per Million Cubic Feet	20.0	80.0 ¹ 120.0 ²	5.3	Negligible	0.2
¹ For residential use.					
² For nonresidential use.					

Increased Evaporative Emissions from the Storage and Dispensing of Gasoline and Diesel for Project-Related Vehicles

As previously demonstrated, vehicle trips from the proposed project are anticipated to generate 18,934,449 miles per day. Of these, 16,351,806 miles will be by automobiles, 1,832,843 miles will be by trucks and busses, and 749,800 miles will be by motorcycles. Based on an average gasoline consumption of about 32 miles per gallon for both automobiles and motorcycles, approximately 534,425 gallons of gasoline will be dispensed on a daily basis. As presented above 3.1 pounds of ROG are projected to be released for every 1,000 gallons fueled and the project area will realize 1,657 pounds of ROG per day for gasoline fueling and storage. This loss is included in Table F.2-12.

Furthermore, trucks and buses will consume diesel. These trucks are assumed to get approximately 7.0 miles per gallon. Therefore the predicted 1,832,843 miles traveled will require approximately 261,835 gallons per day. Based on 0.044 pounds of ROG released per 1,000 gallons transferred, the daily quantity of ROG produced due to the use of diesel is calculated at approximately 12 pounds. This loss is also included in Table F.2-12.

Combustion Emissions from Landscape Utility Equipment

In any type of residential development or park setting, landscape maintenance is necessary. AP-42, Table II-5.1 presents emissions for 2- and 4-stroke lawn and garden equipment. Because almost all of this equipment is now 4-stroke, an arbitrary value of 90 percent was placed on 4-stroke equipment with the remainder assigned to 2-stroke units. For the purposes of this analysis, yard maintenance for hillside and country estates is projected at 30 minutes per week per unit. Low, medium, and high density residential dwellings are projected at 20, 15, and 10 minutes per unit per week, respectively and retirement and resort units are each projected at 5 minutes per unit per week. Based on the projected land uses, residential land uses will then require 18,142 hours per week or 2,592 hours per day for landscape maintenance. For parks and golf courses, it is anticipated that approximately 2,500 square feet per minute could be maintained. This equates to a commercial mower

covering an area 5 feet wide at an average speed of 5.7 mph. Based on an area of 349.5 acres, 101 hours per week or 14.5 hours per day would be needed landscape maintenance. Note that these values do not include the maintenance of landscape for commercial and industrial acreage, but due to the desert climate, many of the dwelling units probably would undergo no or minimal maintenance. Furthermore, it is anticipated that with time more electric and manually powered yard maintenance equipment would be used and the overestimate for these units would then compensate for the areas that are not addressed.

The average unit (including domestic and commercial lawn mowers, edgers, trimmers, and leaf blowers) is estimated at 3 hp. In all approximately 2,607 hours per day would be dedicated to this maintenance. Therefore approximately 7,820 horsepower-hours would be expended on a daily basis. The emissions for this landscape maintenance are presented in Table F.2-12.

Miscellaneous Pollutant Sources

Other emissions are associated with miscellaneous commercial and industrial processes such as manufacturing and smaller types of businesses such as dry cleaning. These emissions, however will ultimately depend on the types of facilities constructed and will typically produce far fewer emissions than the mobile and secondary impact sources listed above. However, before these types of land uses are permitted, they should undergo CEQA review to determine their potential for significant adverse impacts on the local air quality.

Summary

Table F.2-15 presents the combined projected mobile and stationary source emissions produced in the planning area in the year 2015. Note that these values exceed the SCAQMD thresholds for significance and a significant impact is anticipated. Furthermore, these emissions contribute to existing exceedences of both the CAAQS and NAAQS also making them significant.

Table F.2-15**YEAR 2015 AIR POLLUTION EMISSIONS FOR INDIO PLANNING AREA**

Pollutant	Mobile Sources (Lb/day)	Stationary Sources (Lb/day)	Total Emissions (Lb/day)
Carbon Monoxide	152,377	5,152	157,529
Nitrogen Oxides (NOx as NO ₂)	24,309	10,533	34,842
Reactive Organics	18,320	2,639	20,959
Sulfur Oxides (SOx as SO ₂)	2,892	758	3,650
Particulate Matter	4,951	275	5,226

F.2.5 Consistency with the AQMP

CEQA requires that projects be consistent with the AQMP. A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the AQMP by fulfilling the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed and providing local agencies with ongoing information assuring local decision-makers that they are making real contributions to clean air goals contained in the 1991 AQMP and PM-10 Plan. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review. This is because the AQMP strategy is based on projections from local General Plans. Therefore, projects that are consistent with the local General Plan are considered consistent with the air quality-related regional plan. The Proposed General Plan will therefore require a consistency determination.

There are two key indicators of consistency with the AQMP. The first is that the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. The second is that the project not exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out and phase.

Consistency is then determined by performing an analysis of the project with the assumptions of the AQMP for the year 2010. The AQMP takes the regional jobs/housing balance (as well as many other variables) into account in its prediction of future air quality. Therefore, if development in the project area has been considered in the AQMP, the project will generally be found to be consistent with the Plan.

A subregion is balanced if it had an employment to housing ratio of 1.27 in 1984 and a projected employment to housing ratio of 1.22 in 2010. Ideally, each city in the greater southern California area would achieve this ratio to attain the overall balance reducing the need for extended commuter

trips. This however is not practical due to the locations of employment centers and housing areas which tend to be grouped as a result of zoning ordinances as well as budgetary and practical constraints. Furthermore, a balance of jobs to housing does not ensure that those jobs are filled by local residents. Therefore, one must typically examine the overall ratio for both subareas and areas on a larger scale.

The city of Indio had a jobs/housing balance ratio of *** in 1987 and has a projected ratio of *** in 2010 making it housing-rich.

The General Plan predicts 65,216 dwelling units in the planning area by the year 2010. This is up 436 percent from the existing 14,958 units. By area, residential land uses will increase from 2,925 to 12,704 acres, or 434 percent. Commercial, industrial, and public land uses will occupy 6,719 acres, up 359 percent from the 1,873 acres currently allocated to these types of land uses. Because the percentage of land dedicated to housing will climb more than the area dedicated to providing jobs, the city's projected jobs/housing balance will be further degraded with time.

As mentioned above, examination of the jobs/housing balance on a larger scale is warranted to predict significant impacts. Riverside County is the fastest growing county in the South Coast region. In 1984 the county population was 757,000. By 2010 the county population is projected to increase by an additional 1.2 million over the 1984 level. With only about 3 percent of the total county land currently urban and land being both ample and affordable, the potential for housing growth is profound. The county is projected to capture 21 percent of the region's housing growth. By 2010, housing is projected to increase by 566,000 units from the 326,000 units in 1984 for a total increase of 274 percent. During this same period the county is projected to add 230,000 jobs, or about 8 percent of the projected increase in regional employment. When the 230,000 jobs are compared to the 566,000 dwelling units, a jobs/housing ratio of about 40.6 percent is predicted and would further upset the jobs/housing balance beyond current levels.

The Riverside County desert area contained 100,800 dwellings in 1984 and provided 71,800 jobs for a jobs/housing ratio of 0.71. For 2010 the area is

AIR QUALITY

projected to contain 243,200 dwellings and provide 160,700 jobs degrading the ratio to 0.66.

This increasing jobs/housing imbalance in the city, the desert area, and the county can only intensify existing problems and further impact patterns of mobility and air quality, and presents a significant impact on both the local region and the South Coast Air Basin as a whole.

F.2.6 Cumulative Impacts

The city of Indio is located in the South Coast Air Basin which is out of attainment for both the state and federal limitations for both ozone and carbon monoxide and the state particulate standard. Though the goal of the 1991 AQMP is to reach federal attainment for CO, NO₂, PM-10, and ozone in the years 2000, 2000, 2006, and 2010, respectively and the state standards for attainment for CO and NO₂ are by the years 2005 and 2000, respectively, the state standards for PM-10 and ozone will not be met until beyond the year 2010. Therefore, in accordance with SCAQMD methodology, even if air emissions can be reduced to levels below those considered significant on a daily basis, all emissions are significant when considered on a cumulative basis, and must be mitigated to the extent feasible. Furthermore, the air basin can only achieve the federal and state standards by the dates specified if all projects mitigate their adverse air quality impacts (including those that are not of a level of daily significance) using state-of-the-art mitigation measures applicable at the time of project construction and subsequent occupancy.

F.3 MITIGATION MEASURES

F.3.1 Construction

Exhaust Emissions

Site construction will create exhaust pollutants from onsite earth movement and vehicles bringing both construction workers and building materials to the site. Tables F.2-4 and 5.2-5 allow local planners to screen construction exhaust pollutants for significant daily impacts based on equipment use on a project-by-project basis. Section 5.2.2.2 also shows that with no dust control measures, grading of an area

over 3 acres in size on a daily basis can create a significant PM-10 impact. Using this information, construction may be phased to avoid the daily significance thresholds set by the SCAQMD. However, as the South Coast Air Basin is in nonattainment, all construction is considered significant on a cumulative basis and must be mitigated to the extent feasible regardless of daily impact levels. The following guidelines will aid planners as to the types of mitigation measures deemed by the SCAQMD as necessary to reduce the impacts of construction. The list is not wholly inclusive and as better mitigation measures become available over time they should also be included. Furthermore, the efficiency of the mitigation will ultimately depend on the measures adopted on a project-by-project basis and the technology available at the time of construction.

- ▶ Use low emission onsite mobile construction equipment;
- ▶ Maintain equipment in tune as per manufacturer's specifications;
- ▶ Use catalytic converters on gasoline-powered equipment;
- ▶ Retard diesel engine injection timing by 4 degrees;
- ▶ Use reformulated, low-emissions diesel fuel;
- ▶ Substitute electric and gasoline-powered equipment for diesel-powered equipment where feasible;
- ▶ Where applicable, equipment will not be left idling for prolonged periods (i.e., 2 minutes); and
- ▶ Curtail (cease or reduce) construction during periods of high ambient pollutant concentrations (i.e., Stage 2 smog alerts).

The City shall verify use of the above measures during normal construction site inspections.

Fugitive Dust

Developers should be encouraged to design projects so as to follow the natural contours of the existing

land thereby avoiding or reducing the amount of grading and earth movement. However, with any sizable construction project some measure of grading and soil movement is always necessary. As a minimum the measures set forth in the city of Indio's Ordinance No. 1138 should be strictly enforced. Additionally, to control fugitive dust emissions and ensure that nuisance dust conditions do not occur during construction, the SCAQMD presents dust control measures in accordance with Rules 402 and 403. The following, though not wholly inclusive, will aide planners in the application of dust control measures for site construction.

- ▶ Spread soil binders on site, unpaved roads, and in parking areas.
- ▶ Water the site and equipment in the morning and evening.
- ▶ Reestablish ground cover on the construction site through seeding and watering.
- ▶ Pave onsite haul roads.
- ▶ Phase grading to prevent the susceptibility of large areas to erosion over extended periods of time.
- ▶ Schedule activities to minimize the amounts of exposed excavated soil during and after the end of work periods.
- ▶ Dispose of surplus excavated material in accordance with local ordinances and use sound engineering practices.
- ▶ Restore landscaping and irrigation that are removed during construction in coordination with local public agencies.
- ▶ Sweep streets on a daily basis if silt is carried over to adjacent public thoroughfares or occurs as a result of hauling.
- ▶ Suspend grading operations during high winds in accordance with Rule 403 requirements.
- ▶ Wash off trucks leaving site.
- ▶ Maintain a minimum 12-inch freeboard ratio on haul trucks.

- ▶ Cover payloads on haul trucks using tarps or other suitable means.

Volatile Organic Emissions

The emissions associated both with the storage and dispensation of fuels, the use of coatings, and paving operations must also be controlled as these emissions are direct ozone precursors. The following measures will aide in the control of these emissions.

- ▶ Use the most up-to-date available vapor recovery systems and fuel transfer methods for all fueling operations. Retrofit older systems as technology evolves.
- ▶ Specify the use of high volume low pressure or manual application of paints and coatings on structures. Where applicable, use pre-finished or pre-primed and sanded wood molding and trim products and pre-primed wallboard.
- ▶ Where applicable, specify the use of non-polluting powder-coating operations and powder-coated metal products.
- ▶ Where applicable, specify the use of concrete, asphaltic cement, or emulsified asphalt. Avoid cut-back asphalt where ever feasible.

F.3.2 Occupancy

Exhaust Emissions

To the maximum extent practical, the city shall specify measures to reduce air pollutant emissions. To assure compliance with these measures, the city shall review tentative tract maps and the following measures shall be implemented.

- ▶ All large scale developers shall assist the city in implementing transportation demand management measures related to each proposed project (ref: "A Reference Guide to Transportation Demand Management") published by Southern California Association of Governments. Such measures shall include:

AIR QUALITY

- Providing funding for signal coordination in the project vicinity.
- Providing funds or land for park-and-ride lots/stations.
- Coordinating transit service to the development through provision of bus stops, transit stops, shuttle stops, bus shelters and turnouts, and bicycle/transit interface.
- ▶ Large scale developers shall assist the city with ongoing development of an Air Quality Element and local ordinances to reduce vehicle miles traveled by the community. Such assistance shall take the form of monetary contribution to special studies or provision of specific research data or project information if requested by the city.
- ▶ Large scale developers shall implement ridesharing incentives, walking and bicycling incentives, parking management program, (i.e., parking spaces to ridesharers and removing street parking), auto use restriction program, and truck movement restriction program to the extent feasible. Verification of such programs shall be made by the city prior to issuance of occupancy permits.
- ▶ Promote Transportation Management Associations (TMSs).
- ▶ Subsidize efficient methods of mass transportation.
- ▶ Encourage employers to establish telecommuting programs, alternate work schedules, and satellite work centers.
- ▶ Work with the city/developers/citizens in the region to implement transportation demand management (TDM) goals.

Finally, the city should exemplify the above procedures through the adoption of the following measures:

- ▶ Replace existing vehicles fleets using gasoline and diesel internal combustion engines with clean-burning and non-polluting vehicles.
- ▶ Utilize compressed work-weeks to reduce city employee commute trips.
- ▶ Monitor traffic patterns and implement traffic and road improvements as specified in the traffic study as prepared by Kahn (1993).

Additionally, the city shall encourage businesses to adopt the following measures where applicable:

- ▶ Ensure efficient parking management.
- ▶ Encourage employers to provide dedicated parking spaces with electrical outlets for electric vehicles.
- ▶ Establish peripheral park-n-ride lots.
- ▶ Where applicable, provide preferential parking to high occupancy vehicles and shuttle services.
- ▶ Configure parking areas to minimize traffic interference by providing adequate ingress and egress.
- ▶ Charge parking lot fees to low occupancy vehicles.

Secondary Impacts

- ▶ All developers shall provide mitigation for secondary source emissions, (i.e., emissions associated with stationary sources within the development) inclusive of, but not limited to, the measures listed below. During design review and prior to issuance of building permits the city will assure confirmation that the measures have been incorporated to the maximum extent feasible.
- ▶ State of California Title 24 regulations for energy efficient design shall be implemented.
- ▶ Energy costs shall be included in the capital expenditure analyses.
- ▶ Incorporate appropriate passive solar design.
- ▶ Minimize electricity distribution losses.
- ▶ Limit installed lighting loads.

- ▶ Install lamps which give the highest light output per watt of electricity consumed.
 - ▶ Control mechanical systems or equipment with time clocks or computer systems.
 - ▶ Recycle lighting system- or process-heat for space heating during cool weather, and exhaust this heat via ceiling plenums during warm weather.
 - ▶ Cascade ventilation air from high-priority (occupied spaces) areas to low-priority (corridors, equipment, and mechanical spaces) areas before being exhausted.
 - ▶ Facilitate the use of electric yard maintenance equipment through the placement of exterior outlets both front and rear for all single family dwellings.
 - ▶ Require the installation of electrical outlets in residential garages for the proliferation of electric vehicles.
 - ▶ Landscape with native drought-resistant species to reduce water consumption and provide passive solar benefits.
 - ▶ Reduce the production of particulate matter by installing fireplaces designed to burn natural gas to the exclusion of wood where applicable.
 - ▶ The city should retrofit their existing structures with energy efficient fixtures, equipment, and insulation.
- various incentive programs geared to bringing businesses into the area.
- ▶ The city should stress the development of mixed-use land uses to reduce daily vehicle miles traveled.
 - ▶ Because construction creates short-term jobs, when the city awards job bids, preferential treatment should be given to local contractors.
 - ▶ If more businesses do not locate in the local area or the Riverside County desert area, the city should consider placing a moratorium on residential development.

F.4 UNAVOIDABLE ADVERSE IMPACTS

Implementation of the above mitigation measures will reduce the air emission impacts. However, when considered on a large scale basis NO₂, ROG, and PM-10 emissions (especially that due to land disturbance) are expected to remain significant. All other air emissions are considered adverse as they contribute to the regionally degraded air basin.

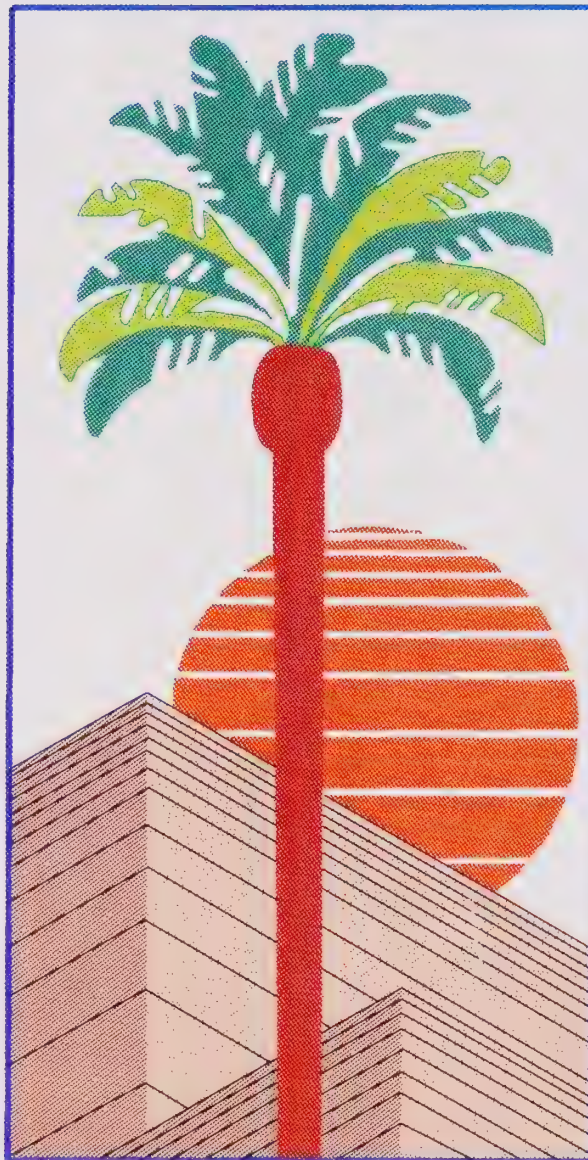
AQMP Consistency

The General Plan projects land uses which further degrade the jobs/housing imbalance for both the local and regional areas. This creates the need for commuting into areas that are job rich such as Orange County, necessitating the increased use of vehicles with their attendant emissions. Though the measures proposed to reduce vehicle emissions may reduce local and regional pollutant levels, this imbalance needs to be addressed. Here, applicable mitigation includes the following measures:

- ▶ The city should stress the development of commercial and industrial land uses through

APPENDIX G

**NOTICE OF PREPARATION, PERSONS CONTACTED,
AND COMMENT LETTERS RECEIVED**



INDIO

GENERAL
PLAN 2020

**NOTICE OF PREPARATION
INDIO GENERAL PLAN DRAFT EIR**

NOTICE OF PREPARATION

TO: AGENCIES, ORGANIZATIONS, AND INTERESTED PERSONS

FROM: CITY OF INDIO
COMMUNITY DEVELOPMENT DEPARTMENT
100 Civic Center Drive
Indio, CA 92201

SUBJECT: NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT TITLE: CITY OF INDIO - GENERAL PLAN 2020

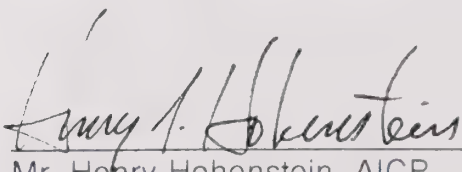
PROJECT APPLICANT: CITY OF INDIO

PROJECT CONSULTANT: CHAMBERS GROUP, INC.
4324 Latham Street, Suite 140
Riverside, CA 92501
(714) 276-8344

The City of Indio will be the Lead Agency in the preparation of an Environmental Impact Report for the project identified herein. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approvals for the project.

The project description, location, and the probable environmental effects are contained in the attached Project Description.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 30 days after receipt of this notice by your agency. Please send your response to Mr. Henry Hohenstein, AICP, Community Development Director, at the address shown above for the City of Indio. Please indicate a contact person, including a address and phone number where the contact person can be reached, in your response. If you require additional information, please call Mr. Hohenstein at (619) 342-6500.



Mr. Henry Hohenstein, AICP
Community Development Director
City of Indio

1 April 1993
Date

CITY OF INDIO GENERAL PLAN UPDATE

PROJECT DESCRIPTION

PROJECT LOCATION

The city of Indio is located in Riverside County, approximately 120 miles directly east of Los Angeles and 15 miles east of Palm Springs, as presented in Figure 1, Coachella Valley Region. Adjacent jurisdictions include the city of La Quinta to the west, an unincorporated area of Riverside County to the south, the city of Coachella to the east, and unincorporated county land to the north. The Planning Area for the General Plan contains the existing city limits, the city's current sphere-of-influence, and additional unincorporated lands that have a direct impact and link to the city. The total Planning Area covers approximately 41.5 square miles as shown on Figure 2, Planning Area. The 1992 population for the city of Indio was 40,378.

- ▶ Obtain input from those living, working, or owning property in the Planning Area to determine the issues and opportunities they see today and in Indio's future.
- ▶ Establishing community goals and policies to address the changing needs of the community.
- ▶ Providing the city with a comprehensive, internally consistent plan that conforms with all applicable laws, including the California General Plan Guidelines, the Public Resources Code, and the California Environmental Quality Act (CEQA).

PROJECT PURPOSE AND OBJECTIVES

The current Indio General Plan was adopted in 1978. The General Plan adopted at that time was a multi-tiered land use plan, consisting of a land use map and a policy plan. The policy plan is a lengthy document which covers all of the state-mandated general plan elements, along with some localized attention areas. It has since become dated because of population growth and physical expansion of the city, changes in the desired direction for the city's future, and new requirements for general plan elements by the State of California. These changes have resulted in the city of Indio determining that a General Plan Update was necessary.

The objectives of this project include:

- ▶ Expanding the Planning Area to include lands outside the current corporate limits of the city of Indio that will directly impact the future of Indio.
- ▶ Prepare a database of the physical, social, and natural environmental information about the Planning Area.

DESCRIPTION OF PROJECT'S PROPOSED PROCESS

The plan for Indio's future is based on a set of building blocks, with each step providing for input from the public, and an opportunity to review past work as part of the "big picture".

The first step is the Environmental Setting Report (ESR). This document, which continues to be revised as new information is collected, provides the environmental background data used in the General Plan. The purpose of this report is to provide a "picture" of how Indio was at the time the General Plan was prepared.

The second step in the General Plan process is the assessment of the opportunities and challenges in the planning area, as well as a review of the issues that are of concern to those living, working, and owning property in the city.

The third step is the Alternatives Report. This report presented several general land use and policy alternatives that were based on previous planning inputs as well as continuing public workshops. The primary purpose of this report is to give the City Council, Planning Commission, and interested members of the public a status report on the findings and work in progress on the General Plan. The information gathered at this meeting, as well as inputs from the responses to the Notice of

Preparation (NOP) will be used to further refine the General Plan documents and maps.

The fourth and final step is the preparation of the General Plan and Program EIR. The General Plan will contain a compilation of the goals, policies, and implementation measures identified and refined throughout all four steps of this process. The General Plan EIR will evaluate the environmental impacts, both positive and negative, that will be associated with the implementation of the new General Plan. This document will present decision makers with a full understanding of the implications of the General Plan on the City's future. Upon adoption, the General Plan will be used to guide the physical development within the planning area through the year 2020.

CHARACTERISTICS OF THE GENERAL PLAN UPDATE

The General Plan Update will be comprehensive, long-term, and internally consistent. As mandated by state law, the General Plan will include all seven mandated elements: land use, housing, circulation, open space, conservation, noise, and safety. As allowed by state law, the seven mandated elements will be consolidated into the following four elements to allow for ease of use and the maintenance of the plan's currency.

- ▶ **Community Development Element.** This element covers land use, circulation, infrastructure and public services, community services, community design, government, and economic development. This element includes the state mandated land use and circulation elements.
- ▶ **Housing Element.** This element covers the provision of housing within the Planning Area. Although this element is directly tied to the issues covered in the Community Development Element, the State Office of Planning and Research consolidation guidelines do not recommend its consolidation with other elements. Housing is recommended to stand on its own because of its specific update requirements and separate

state review process. This is a state required element.

- ▶ **Environmental Resources Element.** This element covers open space, soils, water resources, biology, energy conservation, mineral resources and cultural resources. This element consolidates the state required conservation and open space elements.
- ▶ **Public Health and Safety Element.** This element covers noise, air quality, emergency services, hazardous materials, geology/seismicity, flood hazards and airports. This element consolidates the noise and safety elements required by the state, and also includes an air quality sub-element as required by the 1989 Air Quality Management Plan.

DESCRIPTION OF POTENTIAL ENVIRONMENTAL IMPACTS OF THE PROPOSED GENERAL PLAN UPDATE

According to Government Code Section 15060 (c) and 15063 (a) of the California Environmental Quality Act (CEQA), if a lead agency, the city of Indio in this case, determines that an EIR will be clearly required for a project (the General Plan update), the agency may skip further initial review of the project and begin work directly on the EIR process. CEQA suggests that the lead agency review the Environmental Checklist form to ensure that all environmental issue areas are addressed. The city of Indio has reviewed the Environmental Checklist form and the following environmental issues were identified.

Earth Resources

Implementation of the proposed General Plan goals and policies will result in altering the development patterns within the Planning Area. A portion of the Planning Area north of Interstate 10 is in an Alquist-Priolo Special Studies Zone and is subject to severe seismic events. New development in these areas could potentially expose people to the

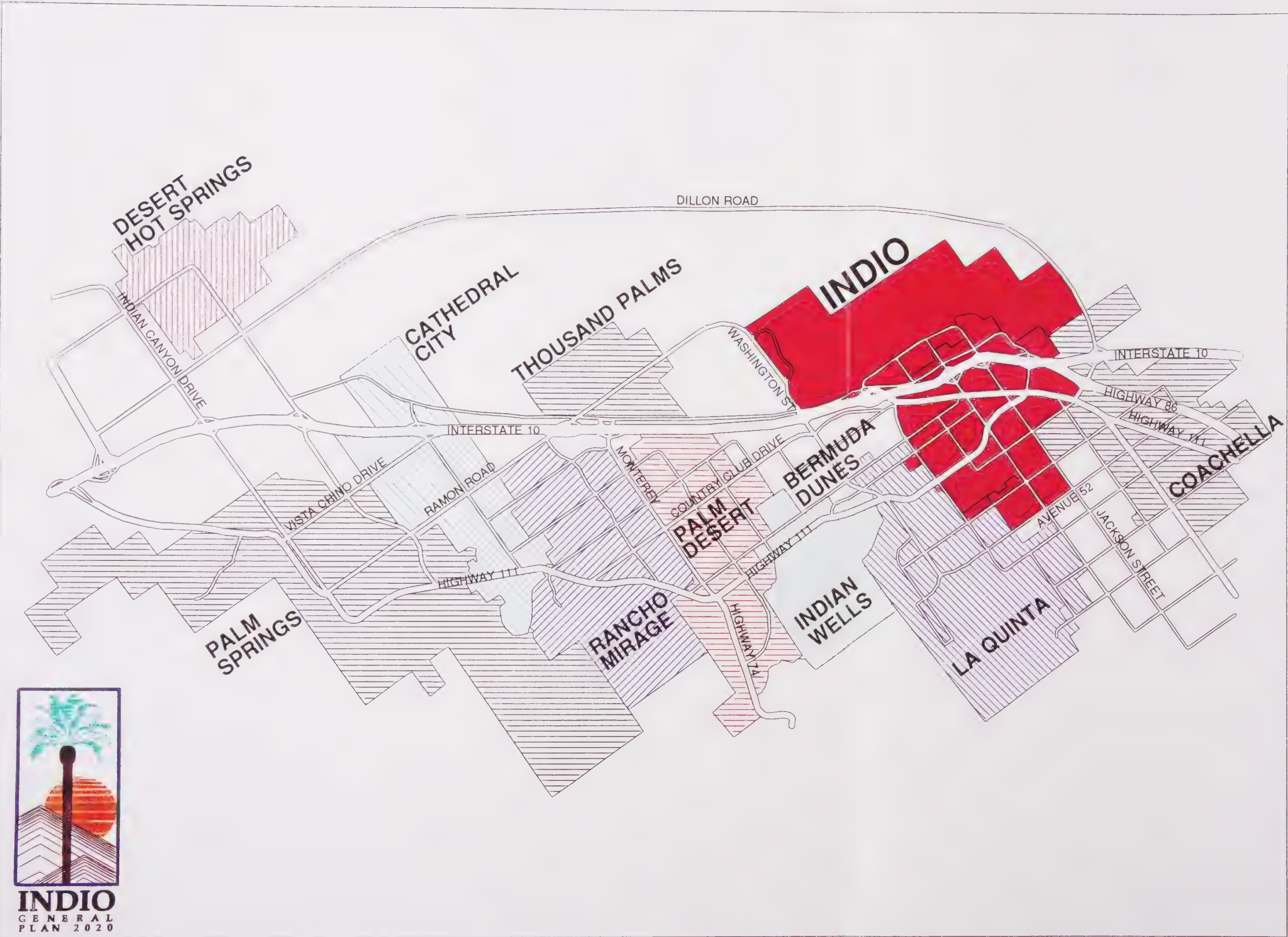
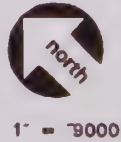


Figure 1
COACHELLA VALLEY
REGION


Chambers Group Inc.
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Gary Mitchell Associates
Zelzer Geotechnical





- Planning Area
-  Incorporated Land City of Indio
 -  Planning Area Boundary

Figure 2
INDIO GENERAL PLAN
PLANNING AREA

 **Chambers Group Inc.**
Robert Kahn, John Kain & Associates
Associated Engineers
Stanley R. Hoffman Associates
Gary Mitchell Associates
Zaner Geotechnical



hazards of liquefaction, subsidence, and other seismically related hazards. In addition, other portions of central Indio are also susceptible to liquefaction. Seismic safety in downtown Indio is also of concern because of the age and design of buildings in that area.

Grading for infrastructure and development will displace soils which may increase the potential of erosion by wind and water. Grading within the steeper slopes of the Indio Hills may have the potential to cause landslides, slope failure, and mud and debris flows.

The General Plan will need to address the limitation of structures in seismically sensitive areas, the retrofitting of buildings that do not meet current building codes, and the reduction of soil erosion due to construction or daily usage.

Air Quality

The city of Indio is located in a non-attainment area for PM₁₀. Implementation of the proposed General Plan will result in an increase in development, with a resulting increase in PM₁₀ emissions. Grading of raw land, motor vehicular travel on unpaved roads, agriculture and mining activities, and open lands create the potential for soils to erode with the wind, which in turn releases small dust particles (PM₁₀) into the air.

Implementation of the General Plan will result in a substantial increase in population in the Planning Area over that which is planned under the current General Plan over the next twenty years.

Increases in development will result in increases in motor vehicle travel, increases in energy use (emissions from heating and cooling systems), and construction impacts which have the potential to cumulatively impact air quality.

As stated under earth resources, the General Plan will need to address the reduction of PM₁₀ emissions in the Planning Area and region through construction mitigations and use controls.

Water

Development as a result of implementation of the proposed General Plan may result in an increase in rainwater runoff and a decrease in permeation of water for groundwater recharge through the creation of impermeable surfaces. Rainwater runoff may be accelerated as it discharges into natural drainage channels possibly causing an increase in soil erosion. Increased runoff may also have the potential to cause flooding and alteration in flood water courses. Increased development may also have the potential to expose people and structures to flooding.

Indio is located in an area of groundwater recharge. Additional development has the potential to increase pollutants in rainwater runoff, increasing the potential to degrade groundwater quality in the area. The General Plan will need to address the protection of groundwater resources as well as plans for reducing the demands on underground water sources.

Increases in development will increase the need for potable water. Additional water resource demands can be offset by water conservation which will be proposed as goals and policies in the General Plan.

Biological Resources

Implementation of the proposed General Plan may lead to increased population density resulting in a reduction in the diversity of species or number of species of plants, including rare and endangered plants that are known to exist in the area.

The increasing urbanization in the area, facilitated by the implementation of the proposed General Plan, will likely involve the use of nonnative vegetation for landscaping purposes, which may compete with existing native vegetation.

The increase of domesticated animals due to development may affect the natural balance of animals in the area. Increased development can also alter and decrease native animal habitats throughout the area through removal of vegetation and increased pollutants.

Impacts to biological resources can be mitigated through the use of proper field surveys and careful site planning. The General Plan will need to identify areas of potential biological significance, and work to preserve these areas in order to maintain the species present.

Noise

Implementation of the proposed General Plan as well as continued development in the region will result in increased vehicular traffic in and through the Planning Area. This increased vehicular traffic will result in increase noise levels along arterial roadways. New commercial and industrial land uses also have the potential to increase noise levels. The impact of these uses will depend on the type of activity proposed and the relation of this activity to sensitive receptors, such as residential uses.

The General Plan will need to locate land uses that are compatible with each other, and to provide necessary buffers between incompatible land uses. The plan also needs to avoid placing sensitive land uses, such as residential, near areas that have high noise levels today.

Light and Glare

New development as a result of implementation of the proposed General Plan will increase light and glare in the Planning Area by the development of urban land uses in areas that are currently undeveloped or are in agricultural uses.

Land Use

The proposed General Plan establishes long-range goals, policies, and implementation measures to guide the future development within the Planning Area. These goals, policies, and implementation measures have been developed with input from those living, working, and owning property in the Planning Area. The mission of the General Plan is to provide the framework for the development of a community that provides for the needs of its

citizens, and supports a safe and clean environment in which to live and work.

The General Plan encourages the retention of existing development, however, changes from existing designations will occur. Implementation of the proposed General Plan, while providing for long-range planning for the planning area, may accelerate future development, especially in areas that are currently vacant or underutilized. Changes in land use patterns will occur to some degree and will have an effect on housing, population, and traffic.

Natural Resources

The increase of development envisioned in the proposed General Plan will to some level result in an increase in the use of some non-renewable resources.

Within the Planning Area, some areas of state identified mineral resources do exist, and the General Plan does designate mineral resource areas to be used for the purpose of mineral extraction.

Population

Implementation of the proposed General Plan will increase employment and residential population within the Planning Area. This will result in alterations in the distribution and density of the population in the Planning Area and potentially the surrounding region.

The proposed General Plan will forecast future population levels and distributions, and provide public services and infrastructure to serve these populations adequately.

Housing

The proposed General Plan will contain a Housing Element as mandated by State law. The Housing Element will include a review of the City's previous housing element in order to evaluate the effectiveness of past programs. An overview of the

community's housing market will also be discussed. The element will also include an assessment of both existing and future housing needs.

Constraints on housing will be evaluated to determine future programs to encourage the development of a range of housing opportunities within the Planning Area. Housing opportunities will be discussed regarding availability of sites for housing and energy conservation. This information will lead to the development of goals, policies, and implementation measures for housing. The element will include a five year housing program formulated to address the community's existing and future housing needs.

Transportation and Circulation

Implementation of the proposed General Plan will increase residential, commercial, industrial, and public facilities within the planning area. The increase in population and employment may create an increase in the demand for additional parking, roadway capacity, and alternative forms of transportation systems such as trails. There may be the potential for increased traffic hazards within the planning area with increased traffic. The proposed General Plan will address the need for future roadway and circulation improvements based on the planned land use patterns.

Public Service

The anticipated growth in residential, commercial, and industrial development as a result of implementation of the proposed General Plan will increase the need for additional police and fire protection, community and municipal services, parks and recreation, schools (primary, secondary, and college levels), wastewater treatment facilities, solid waste facilities, stormwater and drainage facilities, libraries, and health facilities.

Energy

Implementation of the proposed General Plan may result in a significant increase in the demand for electricity, natural gas and the consumption of fossil fuels over the existing resource capacity.

Utilities

Development that may occur as a result of implementation of the proposed General Plan will result in the need to extend water, sewer, drainage, communication, electric, and gas lines throughout the Planning Area. In addition to local distribution lines, new support facilities, such as substations, water tanks, debris basin, etc., will be necessary to support the development proposed. Development will also increase consumption of potable water and energy, and may result in the need for additional supplies and sources.

Aesthetics

Implementation of the proposed General Plan will increase the opportunity for development within the Planning Area, both for additional infrastructure as well as new buildings. These developments have the potential to obstruct and alter existing viewsheds. The proposed General Plan will include policies and implementation measures designed to reduce impacts on scenic viewsheds, and vistas.

Recreation

The City of Indio currently has a shortage of recreational opportunities, primarily in a lack of developed park lands. With or without the General Plan, the population in the area will increase dramatically over the next several decades. The General Plan will address both the existing shortage as well as plans to meet new demands generated by increased population in the Planning Area.

Cultural Resources

Areas within the Planning Area have been identified as containing significant archeological and historic resources. There is the potential that identified cultural resource sites may be impacted through construction activities as a result of the implementation of the proposed General Plan. The potential also exists that unidentified sites may be found during construction activities. The General Plan will develop sensitivity maps for cultural resources as well as plans for the preservation of resources throughout the Planning Area.



*Kandy
Copy to R. Rust*

RECEIVED

APR 23 1993

**South Coast
AIR QUALITY MANAGEMENT DISTRICT** COMMUNITY DEVELOPMENT
CITY OF INDIO

21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

April 16, 1993

Mr. Hohenstein
Community Development Director
City of Indio
100 Civic Center Drive
Indio, CA 92201

Dear Mr. Hohenstein:

**Subject: Notice of Preparation of a Draft Environmental Impact Report for
the City of Indio General Plan 2020**

SCAQMD# RVC930409-01

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the Notice of Preparation for a Draft EIR for the City of Indio General Plan 2020. SCAQMD is responsible for adopting, implementing, and enforcing air quality regulations in the South Coast Air Quality Management District, which includes the project location. As a responsible agency, SCAQMD reviews and analyzes environmental documents for projects that may generate significant adverse air quality impacts. In this capacity, SCAQMD advises lead agencies in addressing and mitigating the potential adverse air quality impacts caused by projects.

To assist the Lead Agency in the preparation of the air quality analysis for the EIR the following is a summarization for evaluating air quality impacts.

Baseline Information: Describe existing climate and air quality of the region and study area from the District Monitoring station located in the project source receptor area.

Identify and quantify all project **Emission Sources**.

Compare and assess anticipated project emissions with the District's **Thresholds of Significance** and the existing air quality of the region and study area.

Identify and assess **Toxic Source Emissions** within the study area.

Assess **Cumulative Air Quality Impacts** from the regional area.

Assess **Consistency of the General Plan** with the AQMP.

Identify and quantify **Project Alternatives** that may attain goals of the project with substantially fewer or less significant impacts.

April 16, 1993

Identify **Mitigation Measures** necessary to reduce air quality impacts substantially.

For additional information please refer to the District's Air Quality Handbook for Preparing Environmental Impact Reports to assess and mitigate adverse air quality impacts. Attached is a list of potential policies and strategies to reduce air quality impacts if incorporated into the General Plan.

Upon completion of the Draft Environmental Impact Report, please forward two copies to:

Office of Planning & Rules
South Coast Air Quality Management District
21865 Copley Drive
P O Box 4939
Diamond Bar CA 91765-0939

Attn: Local Government - CEQA

If you have any questions, please call me at (714) 396-3055

Sincerely,

A handwritten signature in cursive script that reads "Connie Day".

Connie Day
Program Supervisor
Local Government - CEQA

Attachment

(genplnop)

Notice of Completion

Appendix F

See NOTE below

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 916/445-0613

SCH # 93042057

Project Title: INDIO GENERAL PLAN 2020

Lead Agency: CITY OF INDIO

Contact Person: HENRY HOENSTEIN

Street Address: 4324 LATHAM STREET, STE 140

Phone: 714-276-8344

City: INDIO

Zip: 92501

County: RIVERSIDE

Project Location

Country: RIVERSIDE

City/Nearest Community: INDIO

Cross Streets:

Total Acres:

Assessor's Parcel No.:

Section:

Twp.:

Range:

Base:

Within 2 Miles: State Hwy #:

Waterways:

Airports:

Railways:

Schools:

Document Type

CEQA:

☒ NOP

☐ Early Cons

☐ Neg Dec

☐ Draft EIR

☐ Supplement/Subsequent

☐ EIR (Prior SCH No.)

☐ Other

NEPA:

☐ NOI

☐ EA

☐ Draft EIS

☐ FONSI

Other:

☐ Joint Document

☐ Final Document

☐ Other

Local Action Type

☐ General Plan Update

☐ Specific Plan

☐ Rezone

☐ Annexation

☐ General Plan Amendment

☐ Master Plan

☐ Prezone

☐ Redevelopment

☐ General Plan Element

☐ Planned Unit Development

☐ Use Permit

☐ Coastal Permit

☐ Community Plan

☐ Site Plan

☐ Land Division (Subdivision, Parcel Map, Tract Map, etc.)

☐ Other

Development Type

☐ Residential: Units _____ Acres _____

☐ Water Facilities: Type _____ MGD _____

☐ Office: Sq. ft. _____ Acres _____ Employees _____

☐ Transportation: Type _____

☐ Commercial: Sq. ft. _____ Acres _____ Employees _____

☐ Mining: Mineral _____

☐ Industrial: Sq. ft. _____ Acres _____ Employees _____

☐ Power: Type _____ Watts _____

☐ Educational _____

☐ Waste Treatment: Type _____

☐ Recreational _____

☐ Hazardous Waste: Type _____

☐ Other _____

Project Issues Discussed in Document

☐ Aesthetic/Visual

☐ Flood Plain/Flooding

☐ Schools/Universities

☐ Water Quality

☐ Agricultural Land

☐ Forest Land/Fire Hazard

☐ Septic Systems

☐ Water Supply/Groundwater

☐ Air Quality

☐ Geologic/Seismic

☐ Sewer Capacity

☐ Wetland/Riparian

☐ Archeological/Historical

☐ Minerals

☐ Soil Erosion/Compaction/Grading

☐ Wildlife

☐ Coastal Zone

☐ Noise

☐ Solid Waste

☐ Growth Inducing

☐ Drainage/Absorption

☐ Population/Housing Balance

☐ Toxic/Hazardous

☐ Landuse

☐ Economic/Jobs

☐ Public Services/Facilities

☐ Traffic/Circulation

☐ Cumulative Effects

☐ Fiscal

☐ Recreation/Parks

☐ Vegetation

☐ Other _____

Present Land Use/Zoning/General Plan Use

Project Description

Indio General Plan 2020

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. from a Notice of Preparation or previous draft document) please fill it in.

Revised October 1985

ce R-kust

Randy

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO, CA 95814



RECEIVED

APR 28 1993

COMMUNITY DEVELOPMENT
CITY OF INDIO

DATE: Apr 20, 1993

TO: Reviewing Agency

RE: CITY OF INDIO's NOP for
INDIO GENERAL PLAN 2020
SCH # 93042057

Attached for your comment is the CITY OF INDIO's Notice of Preparation of a draft Environmental Impact Report (EIR) for the INDIO GENERAL PLAN 2020.

Responsible agencies must transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

HENRY HOENSTEIN
CITY OF INDIO
4324 LATHAM STREET, SUITE 140
INDIO, CA 92501

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call Russell Colliau at (916) 445-0613.

Sincerely,

A handwritten signature in cursive script that reads 'Christine Kinne'.

Christine Kinne
Deputy Director, Permit Assistance

Attachments

cc: Lead Agency

NOP Distribution List

S = sent by lead agency

X = sent by SCH

Resource Agency

☐ Judy Carpenter
Dept. of Boating & Waterways
1629 J Street
Sacramento, CA 95814
916/445-6281

☐ Gary L. Holloway
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219
415/904-5200

☐ Rod Holderman
State Coastal Conservancy
1330 Broadway, Suite 1100
Oakland, CA 94612
510/464-1015

☐ Steve Oliva
Dept. of Conservation
801 K Street, MS-24-02
Sacramento, CA 95814
916/445-8733

☐ Div. of Mines and Geology
☐ Div. of Oil and Gas
☐ Land Resources Protect. Unit

☐ Douglas Wickizer
Dept. of Forestry
1416 Ninth Street, Room 1516-2
Sacramento, CA 95814
916/653-9451

☐ Hans Kreutzberg
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001
916/653-9107

☐ Mike Doyle
Dept. of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001
916/653-0547

☐ Wendy Halverson
Reclamation Board
1416 Ninth Street Room 706
Sacramento, CA 95814
916/653-9669

☐ Nancy Wakeman
S.F. Bay Conservation & Dev't Comm.
30 Van Ness Avenue, Room 2011
San Francisco, CA 94102
415/557-3686

☐ Nadell Gayou
Dept. of Water Resources
116 Ninth Street, Room 449
Sacramento, CA 95814
916/653-6866

Fish and Game - Regional Offices

☐ Gary Stacey, Regional Manager
Department of Fish and Game
601 Locust
Redding, CA 96001
916/225-2300 (8-442)

☐ Jim Messersmith, Regional Manager
Department of Fish & Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
916/355-0922 (8-438)

☐ B. Hunter, Regional Manager
Department of Fish and Game
P.O. Box 47
Yountville, CA 94599
707/944-5518

☐ G. Nokes, Regional Manager
Department of Fish and Game
1234 East Shaw Avenue
Fresno, CA 93710
209/222-3761 (8-421)

☐ Fred A. Worthley, Jr., Reg. Manager
Department of Fish and Game
330 Golden Shore, Suite 50
Long Beach, CA 90802
213/590-5113 (8-635)

Independent Commissions

☐ John R. Nuffer
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814
916/654-3859

☐ Native American Heritage Comm.
15 Capitol Mall, Room 364
Sacramento, CA 95814
916/653-4082

☐ William Meyer
Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
415/703-1540 (8-597)

☐ Betty Eubanks
State Lands Commission
807 - 13th Street
Sacramento, CA 95814
916/322-2795

Business, Transportation, & Housing

☐ Sandy Heanard
Caltrans - Division of Aeronautics
P.O. Box 942874
Sacramento, CA 94274-0001
916/324-1833

☐ Tom Micone
California Highway Patrol
Office of Special Projects
Planning and Analysis Division
2555 First Avenue
Sacramento, CA 95818
916/437-7222

☐ Ron Helgason
Caltrans - Planning
P.O. Box 942874
Sacramento, CA 94274-0001
916/445-5570

Department of Transportation District Contacts

☐ Guy Luther
Caltrans, District 1
1656 Union Street
Eureka, CA 95501
707/445-6407

☐ Michelle Gallagher
Caltrans, District 2
P.O. Box 494040
Redding, CA 96049-4040
916/225-3259 (8-442)

☐ Jody Lomergan
Caltrans, District 3
703 B Street
Marysville, CA 95901
916/741-4277 (8-457)

☐ Gary S. Adams
Caltrans, District 4
P.O. Box 7310
San Francisco, CA 94120
415/557-9162 (8-597)

☐ Wayne Schnell
Caltrans, District 5
P.O. Box 8114
San Luis Obispo, CA 93403-8114
805/549-3683 (8-629)

☐ Marc Birnbaum
Caltrans, District 6
P.O. Box 12616
Fresno, CA 93778
209/276-5989 (8-422)

☐ Gary McSweeney
Caltrans, District 7
120 South Spring Street
Los Angeles, CA 90012
213/620-2376 (8-640)

☐ Harvey Sawyer
Caltrans, District 8
P.O. Box 231
San Bernardino, CA 92402
714/383-4808 (8-670)

☐ Lisa Flores
Caltrans, District 9
500 South Main Street
Bishop, CA 93514
619/872-0203 (8-627)

☐ Al Johnson
Caltrans, District 10
P.O. Box 2048
Stockton, CA 95201
209/948-7838 (8-423)

☐ Mike Owen
Caltrans, District 11
P.O. Box 85406
2829 Juan Street
San Diego, CA 92186-5406
619/688-6750 (8-631)

☐ Aileen Kennedy
Caltrans, District 12
2501 Pullman St.
Santa Ana, CA 92705
714/724-2239 (8-655)

Food and Agriculture

☐ Vaahak Cervinka
Dept. of Food and Agriculture
1220 N Street
Sacramento, CA 95814
916/322-5227

Health & Welfare

☐ Quy Tu
Dept. of Health
601 N. 7th Street, PO Box 942732
Sacramento, CA 94234-7320
916/324-2322

☐ DISTSCD: _____

State and Consumer Services

☐ Robert Sleppy
Dept. of General Services
400 P Street, Suite 5100
Sacramento, CA 95814
916/324-0214

Environmental Affairs

☐ Barbara Fry
Air Resources Board
2020 L Street
Sacramento, CA 95815
916/322-8267

☐ Jeanie Agpoon
Calif. Waste Management Board
8800 Cal Center Drive
Sacramento, CA 95826
916/255-2439 916/255-2341

State Water Resources Control Board

☐ Allan Patton
State Water Resources Control Board
Division of Clean Water Programs
P.O. Box 944212
Sacramento, CA 94244-2120
916/739-4265

☐ Dave Berlinger
State Water Resources Control Board
Delta Unit
P.O. Box 2000
Sacramento, CA 95812-2000
916/322-9870

☐ Phil Zentner
State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95801
916/657-0912

☐ Mike Falkenstein
State Water Resources Control Board
Division of Water Rights
901 P Street, 3rd Floor
Sacramento, CA 95814
916/657-1377 (8-437)

☐ APCD/AQMD: _____

SCH# 83042

Regional Water Quality Control Board

☐ NORTH COAST REGION (1)
5550 Skyline Blvd., Suite A
Santa Rosa, CA 95403
707/576-2220 (8-590)

☐ SAN FRANCISCO BAY REGION (2)
2101 Webster, Suite 500
Oakland, CA 94612
415/464-1255 (8-561)

☐ CENTRAL COAST REGION (3)
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401-5427
805/549-3147 (8-629)

☐ LOS ANGELES REGION (4)
1075 S. Broadway, Rm. 4027
Los Angeles, CA 90012
213/266-4460 (8-640)

☐ CENTRAL VALLEY REGION (5)
3443 Router Road, Suite A
Sacramento, CA 95827-3098
916/361-5600

☐ Fresno Branch Office
3614 East Ashlan Avenue
Fresno, CA 93726
209/445-5116 (8-421)

☐ Redding Branch Office
415 Knollcrest Drive
Redding, CA 96002
916/224-4845 (ATS 441)

☐ LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150
916/544-3481

☐ Victorville Branch Office
15428 Civic Drive, Suite 100
Victorville, CA 92392-2359
619/241-6583

☐ COLORADO RIVER BASIN REGION (7)
73720 Fred Waring Drive, #100
Palm Desert, CA 92260-2564
619/346-7491

☐ SANTA ANA REGION (8)
2010 Iowa Avenue, Suite 100
Riverside, CA 92507
714/782-4130 (8-632)

☐ SAN DIEGO REGION (9)
9771 Clairemont Mesa Blvd., Suite B
San Diego, CA 92124-1331
619/265-5114 (8-636)

☐ OTHER: _____

☐ OTHER: _____

The Gas Company

RECEIVED

JUN 08 1993

COMMUNITY DEVELOPMENT
CITY OF INDIO

4
xc R Floyd
R Rust
Orig to file



To: City of Indio - Community Development Department
100 Civic Center Drive
Indio, CA 92201

5/1/93

Attn: Mr. Hohenstein

Southern California
Gas Company

1981 Lugonia Avenue
Redlands, CA

Mailing Address:
Box 3003
Redlands, CA
92373-0306

RE: City of Indio - General Plan 2020

Thank you for notification concerning the project mentioned above. The Gas Company currently foresees no impact on the environment associated with providing future service to the area if requested.

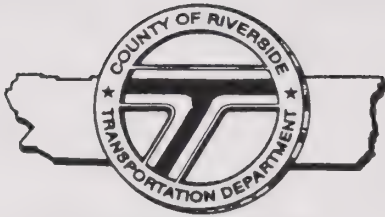
You should be aware that this letter is not to be interpreted as a contractual commitment to serve the proposed project, but only as an informational service. The availability of natural gas service, as set forth in this letter, is based upon present conditions of gas supply and regulatory policies. As a public utility, the Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of federal regulatory agencies. Should these agencies take any action which affects gas supply or the conditions under which service is available, gas service will be provided in accordance with revised conditions.

Typical demand use for:

a. Residential (System Area Average/Use Per Meter) Yearly

Single Family	799 therms/year dwelling unit
Multi-Family 4 or less units	482 therms/year dwelling unit
Multi-Family 5 or more units	483 therms/year dwelling unit

These averages are based on total gas consumption in residential units served by Southern California Gas Company, and it should not be implied that any particular home, apartment or tract of homes will use these amounts of energy.



FRANKLIN E. SHERKOW
Director of Transportation

COUNTY OF RIVERSIDE

TRANSPORTATION DEPARTMENT

PLANNING AND DEVELOPMENT REVIEW DIVISION

April 15, 1993

RECEIVED

APR 23 1993

Mr. Henry Hohenstein, AICP
Community Development Director
City of Indio
100 Civic Center Drive
Indio, California 92201

COMMUNITY DEVELOPMENT
CITY OF INDIO

RE: Notice of Preparation of Draft Environmental Impact Report
(EIR) for the City of Indio General Plan Update

Dear Mr. Hohenstein:

The Riverside County Transportation Department has received the above referenced document for review and comment. As part of the EIR preparation, the Transportation Department requests that a traffic study be prepared to address the impacts potential increased development could have on the City and County circulation system.

Each alternative analyzed in the EIR should identify potential traffic impacts to the road facilities associated with the alternative. The EIR should also identify mitigation measures for the impacts. Any impacts which will remain significant should also be identified. Amendments to the current City circulation element, as a result of this update, should be clearly identified. Any necessary amendments to the County's circulation element must also be identified.

The County of Riverside's Level of Service (LOS) requirement is LOS "C". The LOS requirement is necessary to maintain for those road facilities located in the unincorporated area, within the City's Sphere.

If you have any questions, please contact Terri Paulson, Associate Transportation Planner at (909) 275-6737.

Sincerely,

Edwin Studor
Transportation Planning Manager

TP:jd





b. Commercial

Due to the fact that construction varies so widely (a glass building vs. a heavily insulated building) and there is such a wide variation in types of materials and equipment used, a typical demand figure is not available for this type of construction. Calculations would need to be made after the building has been designed.

To insure that existing facilities are adequate to accommodate the development, an engineering study may be required. Detailed information including tract maps and plot plans must be submitted to the Gas Company Marketing Representative, P.O. Box 3003, Redlands, CA 92373-0306, 1-800-624-2497, six months prior to the actual construction of the natural gas pipeline.

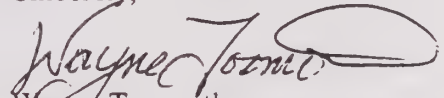
We have developed several programs which are available, upon request, to provide assistance in selecting the most effective applications of energy conservation techniques for a particular project. If you desire further information on any of our energy conservation programs, please contact our Marketing Department, 1-800-842-7758.

**Southern California
Gas Company**

*1981 Lugonia Avenue
Redlands, CA*

*Mailing Address:
Box 3003
Redlands, CA
92373-0306*

Sincerely,


Wayne Toomoth
Technical Supervisor

ATTACHMENT

POTENTIAL POLICIES AND IMPLEMENTATION STRATEGIES

POLICY 1

To reduce particulate emissions from paved and unpaved roads, construction activities, and agriculture operations.

STRATEGIES:

- o Use low emission mobile construction equipment (e.g., tractor, scraper, dozer etc.).
- o Develop trip reduction plan to achieve 1.5 AVR for construction employees.
- o Water site and clean equipment morning and evening.
- o Spread soil binders on site, unpaved roads and parking areas.
- o Apply District approved chemical soil stabilizers according to manufacturers specifications, to all inactive construction areas (previously graded areas which remain inactive for 96 hours).
- o Reestablish ground cover on construction site through seeding and watering.
- o Implement or contribute to an urban tree planting program to off-set the loss of existing trees at the construction site.
- o Employ construction activity management techniques, such as: extending the construction period; reducing the number of pieces of equipment used simultaneously; increasing the distance between the emission sources; reducing or changing the hours of construction; and scheduling activity during off-peak-hours.
- o Pave construction roads, and sweep streets if silt is carried over to adjacent public thoroughfares.
- o Reduce traffic speeds on all unpaved road surfaces to 15 miles per hour or less.
- o Require a phased-schedule for construction activities to minimize emissions.
- o Suspend grading operations during first and second stage smog alerts.
- o Suspend all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.
- o Wash off trucks leaving the site.
- o Maintain construction equipment engines by keeping them tuned.
- o Use low sulfur fuel for stationary construction equipment.
- o Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
- o Use low emission on-site stationary equipment.

POLICY 2

To reduce automobile emissions by reducing the number of vehicles driven to a work site on a daily basis:

STRATEGIES

- o Provide local shuttle and regional transit systems and transit shelters.
- o Provide bicycle lanes, storage areas, and amenities.
- o Ensure efficient parking management.
- o Provide dedicated parking spaces with electrical outlets for electric vehicles.
- o Provide peripheral park-n-ride lots.
- o Provide preferential parking to high occupancy vehicles and shuttle services.
- o Charge parking lot fees to low occupancy vehicles.

POLICY 3

To reduce automobile emissions by reducing the number of persons who must drive to a work site on a daily basis:

STRATEGIES

- o Promote Transportation Management Associations (TMAs).
- o Establish telecommuting programs, alternative work schedules, and satellite work centers.
- o Work with cities/developers/citizens in the region to implement TDM goals.

POLICY 4

To reduce vehicular emissions through traffic flow improvements:

STRATEGIES

- o Configure parking to minimize traffic interference.
- o Minimize obstruction of through-traffic lanes.
- o Provide a flagperson to guide traffic properly and ensure safety at construction sites.
- o Schedule operations affecting traffic for off-peak hours.
- o Develop a traffic plan to minimize traffic flow interference from construction activities. Plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service.
- o Schedule goods movements for off-peak traffic hours.
- o Synchronize traffic signals.
- o Provide adequate ingress and egress at all entrances to public facilities to minimize vehicle idling at curbsides.
- o Provide dedicated turn lanes as appropriate.

POLICY 5

To reduce the length of work trips while expanding the supply of affordable housing and creating an urban form that efficiently utilizes urban infrastructure and services.

STRATEGIES

- o Achieve a job/housing balance compatible with the Regional Growth Management Plan.
- o Encourage growth in and around activity centers, transportation nodes and corridors.
- o Promote future patterns of urban development and land use , making better use of existing facilities, and promoting mixed use development involving commercial and residential uses.

POLICY 6

To reduce stationary emissions of operation related activities.

STRATEGIES:

- o Require development practices which maximize energy conservation as a prerequisite to permit approval.
- o Improve the thermal integrity of buildings, and reduce the thermal load with automated time clocks or occupant sensors.
- o Introduce window glazing, wall insulation, and efficient ventilation methods.
- o Introduce efficient heating and other appliances, such as water heaters, cooking equipment, refrigerators; furnaces and boiler units.
- o Incorporate appropriate passive solar design, and solar heaters.
- o Use devices that minimize the combustion of fossil fuels.
- o Capture waste heat and reemploy it in nonresidential buildings.
- o Landscape with native drought-resistant species to reduce water consumption and to provide passive solar benefits.

POLICY 7

To protect sensitive land uses from major sources of air pollution.

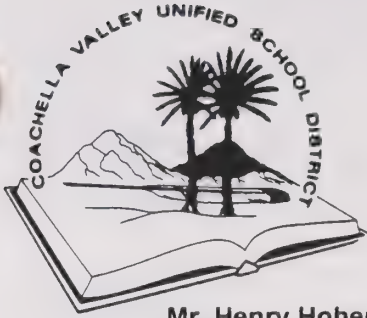
STRATEGIES:

- o Integrate additional mitigation measures into site design such as the creation of buffer zones between a potential sensitive receptor's boundary and potential pollution source.
- o Require design features, operating procedures, preventive maintenance, operator training, and emergency response planning to prevent the release of toxic pollutants.

cc R. Rust

Landy

H
5/3/93



COACHELLA VALLEY UNIFIED SCHOOL DISTRICT

POST OFFICE BOX 847 THERMAL, CALIFORNIA 92274 (619) 399-5137

RECEIVED

April 21, 1993

APR 26 1993

Mr. Henry Hohenstein, AICP
Community Development Director
Community Development Department
City of Indio
100 Civic Center Drive
Indio, California 92201

COMMUNITY DEVELOPMENT
CITY OF INDIO

Dear Mr. Hohenstein:

Thank you for the opportunity to participate in the development of the environmental impact report regarding the General Plan 2020 for the City of Indio. We are very much interested in being a partner in any planning process that could affect our district.

Please involve us in any appropriate steps of the planning process. We are especially sensitive to any plans/projects that would result in housing growth (in particular - low and moderate income housing). That growth increases the number of students and has a significant impact in facilities costs to the district. Current developer fees do not come close in mitigating this negative impact.

Sincerely,

Foch "Tut" Pensis
Assistant Superintendent
Administrative Services



XC R. Runt
R. Floyd
Orig to
Case file

RECEIVED

MAY 17 1993

COMMUNITY DEVELOPMENT
CITY OF INDIO

County Administrative Office

Larry Parrish
Chief Administrative Officer

May 14, 1993

City of Indio
Community Development Department
100 Civic Center Drive
Indio, CA 92201

Attention: Henry Hohenstein, AICP, Community Development Director

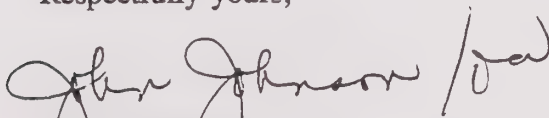
RE: City of Indio - General Plan 2020 NOP

Dear Mr. Hohenstein:

The Riverside County Administrative Office has reviewed the project referenced above, and desires an opportunity to review the DEIR.

If you desire additional information, contact me at (909) 275-1114.

Respectfully yours,


JOHN JOHNSON
Administrative Manager

RECEIVED

PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION

DIVISION OF AERONAUTICS

130 K STREET - 4th FLOOR

MAIL: P. O. BOX 942873

SACRAMENTO, CA 94273-0001

(916) 322-3090

TDD (916) 654-4014

MAY 24 1993

COMMUNITY DEVELOPMENT
CITY OF INDIOX.C.
R. Floyd
R. Rust
Orig Gen Plan
file

May 20, 1993

Mr. Henry Hohenstein
City of Indio
Community Development Department
100 Civic Center Drive
Indio, CA 92201

Dear Mr. Hohenstein:

The City of Indio's Notice of Preparation
for the Indio General Plan 2020

The California Department of Transportation, Division of Aeronautics, has reviewed the above-referenced document with respect to CEQA. The following comments are offered for your consideration.

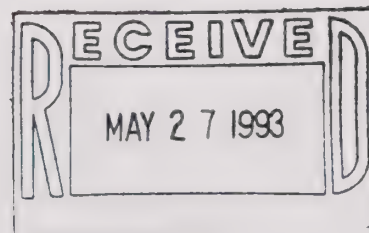
Since portions of the Planning Area are adjacent to the Bermuda Dunes Airport, the draft EIR should address potential aircraft-related noise and safety impacts on the project area. Proposed land uses in the vicinity of the airport should be consistent with the Bermuda Dunes Airport Comprehensive Land Use Plan and with future airport operations. This proposal should also be submitted to the Airport Manager, Michael Smith, for review.

Thank you for the opportunity to review and comment on this proposal. We look forward to reviewing the Draft EIR.

Sincerely,

Sandy Hesnard
SANDY HESNARD
Environmental Planner

cc: Michael G. Smith, Bermuda Dunes Airport
Riverside County ALUC



H

T H E C I T Y O F



RECEIVED

JUN 07 1993

COMMUNITY DEVELOPMENT
CITY OF INDIO

cc R Floyd
R Hunt
Orig to file

June 3, 1993

Mr. Henry Hohenstein, AICP
Community Development Director
City of Indio
100 Civic Center Drive
Indio, CA 92201

SUBJECT: GENERAL PLAN 2020

Dear Hank:

Thank you for sending us a copy of your Notice of Preparation for your EIR regarding your General Plan 2020 for the City of Indio. At this time we have no comments on the document.

Upon completion of your EIR please send us a copy of the draft EIR for our review and comment. We concur that an EIR is necessary for your General Plan and will look forward to reviewing that document upon it's distribution.

Very truly yours,

JERRY HERMAN
Planning & Development Director

JH:bja

LTRJH.266

STATE OF CALIFORNIA - THE RESOURCES AGENCY

PETE WILSON, Governor

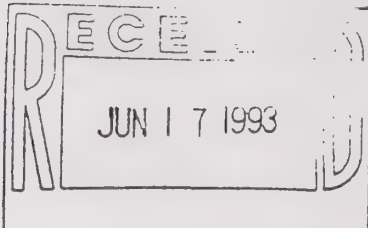
DEPARTMENT OF CONSERVATION

DIVISION OF ADMINISTRATION
DIVISION OF MINES AND GEOLOGY
DIVISION OF OIL AND GAS
DIVISION OF RECYCLING

XC R Floyd
R Rust (FAX) ✓



Orig G.P. File



801 K Street
SACRAMENTO, CA 95814-3514

Telecommunications
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June 1, 1993

Mr. Henry Hoenstein
City of Indio
4324 Latham Street, Ste. 140
Indio, CA 92501

Dear Mr. Hoenstein:

Subject: Notice of Preparation (NOP) of a Draft Environmental
Impact Report (DEIR) for the Indio General Plan 2020
SCH# 93042057

The Department of Conservation has reviewed the City of Indio's NOP for the project referenced above. The Department, is responsible for monitoring farmland conversion on a statewide basis and also administers the California Land Conservation (Williamson) Act. We offer the following comments.

The loss of prime agricultural land should be identified and treated as a significant environmental impact. The California Code of Regulations (CCR) (Title 14, Section 15000 et seq., Appendix G (y)) states that a project will normally have a significant effect on the environment if it will convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land. The DEIR should provide information on the number of acres of agricultural land to be developed, the potential agricultural value of the site, the impacts of farmland conversion, and possible mitigation actions. Specifically, we recommend that the DEIR contain the following information to ensure the adequate assessment of impacts in these areas.

- o The agricultural character of the planning area, including:
 - A map which identifies the location of agricultural preserves, the number of acres and type of land in each preserve (i.e., prime/non-prime).
 - A map which identifies the location of Williamson Act contracts within the site and on surrounding lands.

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- Types and relative yields of crops grown.
 - Agricultural potential of the area's soils, as defined by the Department of Conservation's Important Farmland series map designations.
- o The impacts on Williamson Act contracted land in, and adjacent to, the planning area should be assessed, including the following data:
- A discussion of the effects that termination of Williamson Act contracts would have on nearby properties also under contract. As a general rule, land can be withdrawn from Williamson Act contract only through the nine-year nonrenewal process. Cancellation is reserved for "extraordinary" situations (See Sierra Club v. City of Hayward (1981) 28 CA1.3d 840, 852-855). Cancellation must be based on specific findings that are supported by substantial evidence.
 - If Williamson Act contract cancellation is proposed, include a discussion of the specific findings (Government Code Section 51282) that must be made by the Board of Supervisors in order for Williamson Act contracts to be canceled.

It should also be noted that Government Code Section 51284 states that no contract may be canceled until after the County has given notice of, and has held, a public hearing on the matter. Notice of the hearing must be published and mailed to the Director of the Department of Conservation and other specified entities.

o Farmland Conversion Impacts.

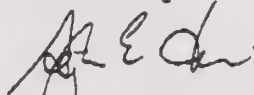
- The type, amount and location of farmland conversion that would result from implementation of the specific plan.
 - The impacts on current and future agricultural operations.
 - The cumulative and growth-inducing impacts of the plan.
- o Mitigation measures and alternatives that would lessen farmland conversion impacts. A public agency must adopt a reporting or monitoring program for adopted project changes which mitigate or avoid significant effects on the environment (Chapter 1232, Statutes of 1988 (AB 3180)). Some of the possibilities are:
- Directing urban growth to lower quality soils in order to protect prime agricultural land.
 - Increasing densities or clustering residential units to allow a greater portion of proposed development sites to remain in agricultural production.

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- Protecting other, existing farmland of equivalent, or better, quality through planning policy that relies on an active and strategic use of the Williamson Act.
- Establishing buffers such as setbacks, berms, greenbelts and open space areas to separate farmland from urban uses. Many communities have considered 300 feet as a sufficient buffer for impacts such as pesticide spraying, noise and dust.
- Implementing right-to-farm ordinances to diminish nuisance impacts of urban uses on neighboring agricultural operations, and vice-versa.
- Implementing a farmland conversion fee to fund a farmland protection program that utilizes land use planning tools such as transfer of development rights, purchase of development rights or conservation easements, agricultural impact fees and farmland trusts.

The Department appreciates the opportunity to comment on the NOP. We hope that the farmland conversion impacts and the Williamson Act contract issues are given adequate consideration in the DEIR. If I can be of further assistance, please feel free to call me at (916) 445-8733.

Sincerely,



Stephen E. Oliva
Acting Environmental Program Coordinator

cc: Kenneth E. Trott
Office of Land Conservation

Coachella Valley Resource Conservation District

APPENDIX H

SIGNIFICANCE CRITERIA

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APPENDIX H - SIGNIFICANCE CRITERIA

The following is a list of suggested significance criteria to be used when determining a project's effects on the environment.

Earth Resources

Impacts of a project will have a significant effect on earth resources if one or more of the following would occur:

Landforms

- ▶ construction of a project will alter landforms through grading in the Indio Hills.

Soils

- ▶ construction or operation of a project as a consequence of the General Plan would result in a substantial nuisance relative to wind or water erosion of soils, or
- ▶ disrupt, displace, or cause compaction or overcovering of soils.

Seismicity

- ▶ construction as a result of the project would exacerbate an existing geological hazard or create a new geologic hazard, or
- ▶ implementation of a project would place people and structures in potential situations of endangerment or unreasonable risk associated with the effects of seismicity induced surface rupture, ground shaking, liquefaction, subsidence, or slope instability leading to slope failure.

Water

Impacts of a project will have a significant effect on water resources if one or more of the following would occur:

- ▶ depletion or recharge of the groundwater occurs which affects a useable aquifer used for municipal, private or agricultural purposes;
- ▶ would substantially degrade the water quality and/or contaminate the public water supply;
- ▶ would result in inundation and/or groundwater level changes that causes an increase in soil settlement or ground swelling which damages structures, utilities or public works;
- ▶ inundation and/or groundwater recharge causes reduced soil pore pressure increasing the likelihood of ground liquefaction should an earthquake occur; or
- ▶ inundation and/or groundwater level changes causes an increase in soil settlement or ground swelling which damages structures.

Flood Control

- ▶ improvements such as grading, construction of barriers and structures, and impervious surfacing increase and/or divert rainfall run-off and/or affect its collection, and conveyance in such a manner as to cause increased inundation, sedimentation and/or damage from water forces to the subject project and/or other properties;
- ▶ runoff mixes with wetlands habitat causing instability to the existing water quality (i.e., increase of dissolved solids, decrease of dissolved oxygen, etc.) which in turn affects the habitat;
- ▶ improvements cause an increase and/or diversion of sediments from runoff to be deposited in a wetlands area which causes a reduction in habitat; or
- ▶ channel improvements create a condition which create downstream velocities which either cause erosion of habitat areas or sedimentation.

An impact will be considered beneficial if it improves upon the criteria mentioned above (i.e., reduces flood risk).

Air Quality

Impacts of a project will have a significant effect on air quality if one or more of the following would occur:

The SCAQMD is the governing agency and sets significance criteria for air emissions from new sources within the South Coast Air Basin in which the city of Indio is located. These emissions are also under the jurisdiction of the California Ambient Air Quality Standards (CAAQS) as well as the less stringent National Ambient Air Quality Standards (NAAQS). For the purposes of this document, air quality impacts are considered significant if they:

- ▶ Exceed daily emission criteria established by the SCAQMD. For operational emissions in the Coachella Valley these levels are as follows:

CO - 550 Lbs/day
NOx - 100 Lbs/day
ROG - 75 Lbs/day
SOx - 150 Lbs/day
PM₁₀ - 150 Lbs/day

However, since a project's impact is limited during the construction phase, a different set of criteria are used. For construction, impacts are considered significant if the following levels are exceeded:

CO - 24.75 tons/quarter
NOx - 2.5 tons/quarter
ROG - 2.5 tons/quarter
SOx - 6.75 tons per quarter
PM₁₀ - 6.75 tons/quarter

Regardless of the quarterly levels, if construction emissions on an individual day exceed 550 pounds per day for CO, 100 pounds per day for NOx, 75 pounds per day for ROG, or 150 pounds per day for PM₁₀, they are considered as significant.

- ▶ Result in emissions that exacerbate existing air quality conditions where air quality standards are already exceeded or result in exceedance of air quality standards.
- ▶ Create air emissions which exceed either the CAAQS or NAAQS.
- ▶ Violate County Rule 402 (Nuisance) or Rule 403 (Fugitive Dust).
- ▶ Violate City of Indio Ordinance No. 1138 for fugitive dust.

Biological Resources

Impacts of a project will have a significant effect on biological resources if one or more of the following would occur:

- ▶ loss of individuals or populations of a federal or state listed threatened or endangered species;
- ▶ substantial loss of individuals or populations of a federal candidate, regionally rare, or otherwise sensitive species;
- ▶ loss of a regionally unique or sensitive habitat, such as wetlands, or palm oasis;
- ▶ substantial loss of species diversity in natural vegetation and wildlife habitat; or
- ▶ interferes or prevents the movement of resident wildlife (e.g., wildlife corridors).

Noise

Impacts of a project will have a significant effect on noise if one or more of the following would occur:

- ▶ the impact significance criteria correspond to the land use compatibility table presented in the Section 5.1 of the Environmental Setting Report. This table shows that acceptable noise levels vary with the type of land use impacted. For instance, single-family residential areas can be exposed to noise decibels up to 60 dBA before a significant impact would occur, or
- ▶ in cases where the ambient (existing) noise levels in an area exceed the significance threshold shown on the land use compatibility table, an impact would be considered to be significant if the additional noise raised the ambient level by over 3 dBA.

Aesthetics

Impacts of a project will have a significant effect on aesthetics if one or more of the following would occur:

- ▶ if a project introduces a visual intrusion that blocks or degrades views of the Indio Hills;
- ▶ implementation of the proposed project will considerably degrade the existing design of the area; or
- ▶ changes to the area will decrease the perceived community character of residents.

Land Use

Impacts of a project will have a significant effect on land use if one or more of the following would occur:

- ▶ conflicts with existing adopted plans of the community, or
- ▶ substantially conflicts with existing adjacent land uses.

Natural Resources

Impacts of a project will have a significant effect on natural resources if one or more of the following would occur:

Mineral Resources

- ▶ conversion of land classified by the State as MRZ-2 to non-mineral extraction uses, or
- ▶ prevent the mineral extraction and/or preservation of lands classified as MRZ-2.

Hazardous Materials

Impacts of a project will have a significant effect on hazardous materials if one or more of the following would occur:

- ▶ expose humans to hazardous materials or hazardous waste;
- ▶ generate hazardous materials or hazardous waste in quantities, or of a type which could not be accommodated by the current County collection system; or
- ▶ result in an increased likelihood of an uncontrolled release of hazardous materials which could contaminate soil, surface water, and groundwater.

Public Services

Impacts of a project will have a significant effect on public services if one or more of the following would occur:

- ▶ would place residents or the general public in a situation of endangerment as a result of inadequate services, resources, and/or safety measures;
- ▶ create or exacerbate an existing fire hazard, or expose people to high fire hazard conditions without adequate fire protection;
- ▶ implementation of the project would result in a demand on services that exceed the operating capabilities of the providers;
- ▶ the project will cause or exacerbate a deficiency in the quantity or quality of community services; or
- ▶ the project creates a demand for community services which exceeds the area facility standards or planned facilities.

Energy

Impacts of a project will have a significant effect on energy if one or more of the following would occur:

- ▶ result in the wasteful, inefficient and unnecessary consumption of fuel and/or energy, or
- ▶ would greatly increase the demand for energy and require the development of a new source of energy.

Transportation/Circulation

Impacts of a project will have a significant effect on transportation and circulation if one or more of the following would occur:

- ▶ a LOS "D" is found for any study intersection, or
- ▶ the future volume to capacity ratio (v/c ratio) is greater than 1.00.

Utilities

Impacts of a project will have a significant effect on utilities if one or more of the following would occur:

- ▶ implementation of the project would result in a demand on services that exceed the operating capabilities of the providers.

Human Health

Impacts of a project will have a significant effect on human health if one or more of the following would occur:

- ▶ interfere with emergency response or evacuation plans, or
- ▶ create a situation involving personal endangerment, or unusual risk to employees, visitors, residents, or the general public.

Recreation

Impacts of a project will have a significant effect on recreation if one or more of the following would occur:

Population

Impacts of a project will have a significant effect on population one or more of the following would occur:

- ▶ The project creates a substantial increase in regional projections of dwelling units.

Cultural Resources

Impacts of a project will have a significant effect on cultural resources if one or more of the following would occur:

Under CEQA, an impact is characterized as having a significant environmental effect if it may cause damage to an "important" archaeological or historic resource. Appendix J of CEQA identifies an "important archaeological resource" as one which:

- (a) Is associated with an event or person of:
 - (1) recognized significance in California or American history, or
 - (2) recognized scientific importance in prehistory.
- (b) Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions;
- (c) Has a special or particular quality such as oldest, best example, largest or last surviving example of this kind;
- (d) Is at least 100 years old and possesses substantial stratigraphic integrity; or
- (e) Involves important research questions that historical research has shown can be answered only with archaeological methods.

Inventory data are often insufficient to determine the importance of cultural resources, particularly archaeological resources. A testing program to provide additional data can be required to determine the age of a resource, its integrity, and/or its ability to answer important research questions. This information is critical in determining a site's importance.

